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Top Executive Compensation
1983 Edition

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Top Executive Compensation
1983 Edition

by Harland Fox

A Research Report from The Conference Board

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Highlights

This report is primarily an analysis of the 1982 compensation of the five highest paid executives in each of 1,155 companies in six major types of business: manufacturing (510 companies), construction (86 companies), gas and electric utilities (92 companies), retail trade (92 companies), commercial banks (127 companies), and insurance (148 companies). The major focus is on 1982 total cash compensation and its two elements, base salary and bonus awards. Using this report, a company can compare the 1982 compensation of its top-paid executives with their counterparts in companies of similar size and type of business.

Compensation Changes

Compared to 1981, 1982 total compensation (which includes bonus awards) was about the same in manufacturing; up by 3 percent in construction, by 7 percent in retail trade, by 9 percent in insurance, and by 10 percent in banks and utilities.

In manufacturing and construction, the proportion of companies that paid a bonus for 1982 performance was significantly lower than in 1981; and, among companies that did pay a bonus, the size of award (as a percent of salary) was also significantly smaller than in 1981.

In each type of business, 1982 base salaries were higher than in 1981, with an 8 percent increase in construction and retail trade, 9 percent in manufacturing, 10 percent in utilities, banks and insurance. These salary increases are at a much lower rate than in previous years; during 1980 and 1981, salaries increased 12 to 13.5 percent.

Annual Bonus Plans

The increased use of annual bonus plans continues, especially among financial institutions: 70 percent of the banks and 62 percent of the insurance companies now have a plan. Gas and electric utilities, too, have continued to adopt an annual bonus: One-third have a plan. Plans are almost universal in manufacturing where 94 percent have a plan, as do 83 percent of the construction companies, and 72 percent of the retailers.

As in prior years, the size of the typical bonus award, as a percentage of salary, is generally lowest among gas and electric utilities (24 percent for chief executive officers), insurance (27 percent) and banks (28 percent for the CEO). In retail trade, the median bonus award for chief executive officers is 41 percent of base salary; in manufacturing, 45 percent; and in construction, 49 percent. In general, the size of the bonus, as a percent of salary, tends to increase with company size.

Long-term Incentives

A sizable proportion of companies in each type of business have a plan for awards of **restricted stock** to top executives: publicly held construction companies, 39 percent; manufacturers, 27 percent; retail trade, 25 percent; stock insurance companies, 23 percent; commercial banking, 12 percent; and gas and electric utilities, 5 percent. Under a restricted stock plan, a company makes an outright award of shares, which are subject to forfeiture until "earned out" over a stipulated period of continued employment, usually three to five years.

Much of the growth in **long-term performance share-unit plans** has taken place in the last five years, but they still are not very common outside of manufacturing, where one-third of the firms now have a plan. About 15 percent of the banks have a plan; 14 percent of the publicly held construction companies; 12 percent of the retailers and insurance companies; and 5 percent of the gas and electric utilities.

In these plans, top executives are given a contingent award of performance units at the beginning of a performance period; the final value of these awards is determined by how closely specified corporate financial targets are met during this performance period of the next three, four or five years. During 1982, the median payout to 339 executives was the equivalent of 33 percent of salary.

There has been a substantial increase in the proportion of companies with a **stock option** plan since 1980 in each type of business: 80 percent of manufacturers have a plan, 63 percent of the retailers, 61 percent of the publicly held construction companies, 48 percent of the stock insurance companies, 44 percent of the banks, and 20 percent of the gas and electric utilities.

The majority of companies with a plan provide for the grants of "incentive stock options" (ISO's): 76 to 92 percent of the plans use ISO's, depending on the type of business. Among the companies that granted stock options during 1982, close to half granted *both* ISO's and nonqualified options. The nonqualified options, however, were limited to those executives whose award was more than the $100,000 per-year limit on the value of ISO awards in 57 to 80 percent of the companies, depending on the type of business.

The value of stock option grants made in 1982 to the five top-paid executives as a group, on the average, was the equivalent of 40 to 89 percent of base salary, depending on the type of business.

Stock-for-stock exercise (stock swaps) of options are provided for in 35 to 66 percent of ISO plans, depending on the type of business, and in about the same proportion of nonqualified option plans.

Stock appreciation rights (SAR's) are provided by 19 to 42 percent of the ISO plans, depending on the type of business, and in about the same proportion of nonqualified option plans. In both cases, about half of the plans limit SAR's to "insiders"; the other plans provide SAR's to all option recipients.

Why This Report

During the past decade, these Conference Board reports on top executive pay essentially have documented inflation-driven pay increases for senior management. But the severe recession and the solid drop in inflation have changed the compensation environment dramatically. Base salary increases dropped sharply. Many companies paid no bonus for 1982 company performance; many of those that continued the bonus practice cut the payout substantially. In manufacturing, the differential impact of the recession produced industry pay differentials for top executives that have not been apparent for decades.

The next few years promise continued change, designed to adapt to a new environment, in executive compensation programs. To better report on this change, beginning this year, The Conference Board will produce this report as an annual survey. (All earlier studies in this series have been conducted every other year.)

The primary purpose of these reports remains the same, however: to provide a basis for corporate compensation planners to compare company pay and pay-related programs in their company with those of companies of similar size and type of business. By making this an annual survey, The Conference Board expects to monitor more closely the significant developments in top-executive compensation.

As in the past, the usefulness of these reports depends on the cooperation of the 1,000 or more companies that provide information. We sincerely thank them.

JAMES T. MILLS
President

Chapter 1
Introduction and Summary

THIS REPORT IS primarily an analysis of the 1982 compensation of the five highest paid executives in each of the companies described in the accompanying box. The major focus is on the basic elements of 1982 cash compensation: base salary and annual cash bonus awards. Total compensation, base salary, and bonus awards for 1982 are compared with 1981.

The report also describes the incidence of, and trends in, four important elements of the executive compensation package: annual bonus plans, long-term performance plans, stock options (and their associated "stock appreciation rights" and "stock swaps"), and restricted stock. For stock options, the size of option grants during 1982 is shown; and for long-term performance plans, the figure is the size of payouts during 1982.

Total compensation (which includes bonus awards) for 1982 increased over 1981 for top executives in each type of business—except in manufacturing where total compensation was about the same as in 1981. Differences in total compensation depend to a considerable degree on the proportion of companies that pay a bonus from one year to the next. As indicated below, the prevalence of bonus awards decreased significantly among manufacturers and construction companies.

Type of Business	*Total Compensation Average Change, 1981-1982*	*Percent That Paid Bonus*	
		1982	*1981*
Commercial banking....	10%	57%	56%
Gas and electric utilities .	10	20	28
Insurance	9	46	47
Retail trade...........	7	58	58
Construction..........	3	65	73
Manufacturing	0	71	83

In addition, among the manufacturers and construction companies that paid a bonus for 1982, the awards (as a percentage of salary) were significantly lower than 1981 awards. Among banks and utilities, 1982 awards were essentially the same in 1981 and 1982. Among retailers and insurance companies, 1982 awards were slightly smaller than those in 1981.

About the Companies

This study is based on information obtained from 1,155 companies in six major types of business. These companies represent only specific segments of their respective types of business, however.

- The 510 **manufacturers** include 53 percent of the manufacturers in the 1982 *Fortune* list of 1,000 industrials.
- The 92 **gas and electric utilities** are 79 percent of all gas and electric utilities whose securities are listed on the New York Stock Exchange.
- The 92 **retailers** include 25 percent of approximately all retailers with sales of $50 million or more.
- The 227 **commercial banks** are 51 percent of approximately all commercial banks with total deposits of $300 million or more.
- The 148 **insurance companies** are 46 percent of approximately all life insurance and property and casualty insurance companies with total premium income of $50 million or more.
- The 86 **construction companies** represent 43 percent of the 200 largest contractors: 28 are publicly held and 58 do not have stock traded on an organized exchange.

In each type of business, 1982 base salaries were 8 to 10 percent higher than in 1981, as the median increases for chief executive officers below illustrate:

Type of Business	*Number of Companies*	*Salary Increase, 1981-1982*	
		Median	*Middle 50 Percent Range*
Commercial banking....	180	10	7 to 19
Insurance	111	10	1 to 17
Gas and electric utilities .	75	10	7 to 16
Manufacturing	392	9	0 to 15
Retail trade...........	57	8	0 to 15
Construction..........	52	8	0 to 12

In each type of business, the salary increase above is at a significantly lower rate than in previous years. For example, during 1980 and 1981, median salaries increased at a rate of 12 to 13.5 percent in each type of business.

1982 Annual Bonus Awards

The trend to increased use of annual bonus plans during the 1970's has continued during the past few years. Bonus plans are almost universal in manufacturing and construction and have continued to grow in gas and electric utilities, commercial banking, and insurance, as shown below.

	May, 1983		*May, 1980*
Type of Business	*Total Companies*	*Percent with Bonus Plan*	*Percent with Bonus Plan*
Manufacturing	510	94%	90%
Construction	86	83	89
Retail trade	92	72	81
Commercial banking	227	70	55
Insurance	148	62	52
Gas and electric utilities	92	33	13

The bulk of companies with a bonus plan made an award for 1982 performance, but in manufacturing and construction a significantly smaller group paid a bonus than in 1981, as shown below.

		Percent that Paid Bonus	
Type of Business	*Total Plans*	*For 1982*	*For 1981*
Commercial banking	157	83%	82%
Retail trade	66	80	80
Construction	71	79	89
Manufacturing	477	75	89
Insurance	92	74	76
Gas and electric utilities	25	72	68

Among the companies that paid a bonus, the size of the award, as a percentage of salary, was lower for 1982 performance than for 1981 in manufacturing, construction and insurance, as illustrated below for chief executive officers:

	Median Award for 1982		
Type of Business	*Number of CEO's*	*Percentage of Salary*	*1981 Median*
Construction	57	49%	57%
Manufacturing	328	45	50
Retail trade	53	41	40
Commercial banking	132	28	28
Insurance	67	27	32
Gas and electric utilities	18	24	30

Among manufacturers, retailers, banks and insurance companies, the bonus awards as a percentage of salary tend to increase as the size of the company increases. (Data were not adequate to check this in construction and utilities.)

Restricted Stock Plans

As shown below, a relatively small group of companies in each major type of business provide for grants of restricted stock. In general, there has been a modest increase in the use of restricted stock during the past three years.[1]

	May, 1983		*May, 1980*
Type of Business	*Total Companies*	*Percent with Restricted Stock*	*Percent with Restricted Stock*
Construction: publicly held	28	39%	30%
Manufacturing	510	27	18
Retail trade	92	25	19
Insurance: stock	71	23	9
Commercial banking	227	12	7
Gas and electric utilities	92	5	4

Under a restricted stock plan, a company makes an outright award of shares to participating executives subject to certain restrictions, the most important of which is that shares are subject to forfeiture until they are "earned out" over a stipulated period of continued employment. This vesting period is generally three to five years.[2]

Long-term Performance Plans

In recent years, some companies have adopted executive incentive plans in which the payoff is based on the attainment of specified *long-term* corporate financial performance goals, in contradistinction to the annual bonus plans that are based on a single year's corporate performance. These plans are generally known as performance share, or unit, plans. In these plans, top executives are given a contingent award of company shares or, more commonly, of performance units at the beginning of a performance period. The actual value of the award is determined by how closely specified corporate financial performance objectives (usually growth in earnings per share) are met during the performance period of the next three, four or five years.[3]

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[1] *Top Executive Compensation 1980 Edition.* The Conference Board, Report No. 793, 1980.

[2] Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review,* First Quarter, 1981, p. 30.

[3] For an analysis of these plans, see Laurence C. Bickford, "Long-term Incentives for Management, Part 6: Performance Attainment Plans." *Compensation Review,* Third Quarter, 1981, p. 18; and Harland Fox, *Executive Incentives: Long-term Performance Share-Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

Table 1: Stock Option Plans by Type of Option Provided

Type of Business	Total Stock Option Plans	Both ISO and Nonqualified		ISO only		Nonqualified Only	
		Number	Percent	Number	Percent	Number	Percent
Manufacturing	406	270	67%	63	16%	73	17%
Construction: publicly held	17	11	65	4	24	2	11
Gas and electric utilities	18	11	61	5	28	2	11
Commercial banking	99	55	56	36	36	18	18
Retail trade	58	29	50	20	34	9	16
Insurance: stock	34	14	41	12	35	8	24

Although the first of these plans was installed in 1971-1972, much of the growth apparently has taken place during the last five years, as illustrated below.[4]

Type of Business	May, 1983 Total Companies	May, 1983 Percent with Performance Plan	May, 1978 Percent with Performance Plan
Manufacturing	510	33%	15%
Commercial banking	227	15	5
Construction: publicly held	28	14	11
Retail trade	92	12	3
Insurance	148	12	4
Gas and electric utilities	92	5	1

The plans are still not common outside of manufacturing and, in each type of business, they are generally found among the largest companies.

A small group of (73) companies made a payment under this type of plan during 1982 to one or more of their five top-paid executives. (Included are 44 manufacturers, 11 banks, 8 insurance companies, 7 retailers, 2 utilities, and a construction company.) The awards for 340 executives are shown below, converted to a percentage of their 1982 base salary.

Award as Percent of Salary	Executives Number	Executives Percent
200-260%	8	2%
100-199	38	11
80-99	23	7
60-79	30	9
50-59	16	5
40-49	36	11
30-39	45	13
20-29	35	10
10-19	55	16
Less than 10%	54	16
Total	340	100%

The median payment is the equivalent of 33 percent of 1982 salary, with the middle half ranging between 15 and 67 percent of salary.

Stock Option Plans

By 1980, nonqualified stock options plans were, for all practical purposes, the only type of stock option used. The Tax Reform Act of 1976 did not allow new qualified plans to be adopted after May 21, 1976, and, for plans adopted before this, outstanding options had to be exercised before May 21, 1981. Then the Economic Recovery Tax Act (enacted on August 13, 1981) created a new type of statutory option, the "incentive stock option" (ISO).[5]

As the tabulation below illustrates, there has been considerable growth in the adoption of stock option plans since 1980.

Type of Business	May, 1983 Total Companies	May, 1983 With Stock Option Plan Number	May, 1983 With Stock Option Plan Percent	May, 1980 Percent with Nonqualified Option Plan
Manufacturing	510	406	80%	68%
Retail trade	92	58	63	43
Construction: publicly held	28	17	61	55
Insurance: stock	71	34	48	18
Commercial banking	227	99	44	23
Gas and electric utilities	92	18	20	8

Generally, the majority of companies with a stock option plan provide for the grant of *both* nonqualified options and ISO's (Table 1). Relatively few companies have only an ISO plan and fewer still, only a nonqualified plan.

Among the companies that have a stock option plan, 43 to 66 percent made a regular grant of options during 1982, as shown below:

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[4] *Top Executive Compensation 1978 Edition*. The Conference Board, Report No. 753.

[5] For an analysis of 189 ISO plans, see Harland Fox, *Incentive Stock Option Plans*. The Conference Board, Research Bulletin No. 148, 1983.

Table 2: 1982 Stock Option Grants by Type of Option

Type of Business	Total Stock Option Grants	Type of Option Granted: Both ISO and Nonqualified: Number	Percent	ISO only: Number	Percent	Nonqualified Only: Number	Percent
Manufacturing	268	148	55%	77	29%	43	16%
Retail trade	25	13	52	9	36	3	12
Gas and electric utilities	10	5	50	3	30	2	20
Insurance: stock	15	7	47	8	53	—	—
Commercial banking	50	21	42	18	36	11	22
Construction: publicly held	10	2	20	5	50	3	30

Type of Business	Companies with Stock Option Plan	Granted Options in 1982: Number	Percent
Manufacturing	406	268	66%
Construction: publicly held	17	10	59
Gas and electric utilities	18	10	56
Commercial banking	99	50	51
Insurance: stock	34	15	44
Retail trade	58	25	43

Except among the publicly held construction companies, close to half of the companies in each type of business granted *both* ISO's and nonqualified options during 1982 (Table 2). However, as shown below, in most cases the nonqualified option was given only to those executives who hit the statutory limit on the size of ISO grants (the value of an individual award cannot exceed $100,000 per calendar year).

Type of Business	Granted Both ISO's and Nonqualified Options	Nonqualified Only Above ISO Limit: Number	Percent
Gas and electric utilities	5	4	80%
Manufacturing	148	109	74
Insurance: stock	7	5	72
Retail trade	13	8	62
Commercial banking	21	12	57
Construction: publicly held	2	0	0

Almost 90 percent of the companies that made a regular grant of options during 1982 provided information about the value of the option for one or more of their five top-paid executives. (The value of the option is the number of shares granted multiplied by the market price at the time of grant.) The size of the grants is shown below, converted to a percentage of base salary, for all five top-paid executives combined.

Type of Business	*Number of Executives*	*Size of Grant (Percent of Salary): Median*	*Middle 50 Percent Range*
Insurance: stock	66	89%	33% to 136%
Manufacturing	1,116	79	47 to 133
Gas and electric utilities	45	72	46 to 100
Commercial banking	245	60	38 to 85
Retail trade	92	52	42 to 75
Construction: publicly held	31	40	24 to 79

A substantial proportion of the companies that have ISO plans provide for **stock-for-stock exercise** (stock swaps), as shown below. This arrangement allows options to be exercised with shares of previously purchased company stock in lieu of cash, a procedure that postpones the taxation of any gain on stock already owned.

Type of Business	*Total Plans*	*With Stock Swap: Number*	*Percent*
Manufacturing	333	220	66%
Commercial banking	91	36	40
Retail trade	49	20	41
Insurance: stock	26	9	35
Gas and electric utilities	16	6	38
Construction: publicly held	15	9	60

As indicated below, the proportion of nonqualified option plans that provide for stock swaps is essentially the same as for ISO plans.

Type of Business	Total Plans	With Stock Swap Number	With Stock Swap Percent
Manufacturing	343	206	60%
Commercial banking	73	31	42
Retail trade	38	20	53
Insurance: stock	22	7	32
Gas and electric utilities	13	4	31
Construction: publicly held	13	9	69

A substantial proportion of the companies that have ISO plans attach stock appreciation rights (SAR's) to the ISO, as illustrated below. The SAR allows an executive to relinquish the option and receive an amount equal to the appreciation in the stock since the date of grant. The gain is taxed as ordinary income at the time it is received. Under an ISO, an executive could otherwise exercise the option without tax at the time, but the SAR allows the executive to take the gain without borrowing money to take the option.

Type of Business	Total Plans	With SAR Number	With SAR Percent
Manufacturing	333	131	39%
Commercial banking	91	38	42
Retail trade	49	15	31
Insurance: stock	26	10	38
Gas and electric utilities	16	3	19
Construction: publicly held	15	6	40

In most plans, the SAR is not given to all ISO recipients; rather, SAR's are limited to options granted to a small group of top executives (essentially, "insiders"). For example, 60 percent of the ISO plans in manufacturing that grant SAR's limit them to the insider group; this is true as well of 55 percent of the banks. (This apparently does not hold in other types of business, but the number of cases on which to judge is small.)

Roughly the same proportion of companies that have nonqualified stock option plans attach SAR's to the options, as shown below.

Type of Business	Total Plans	With SAR Number	With SAR Percent
Manufacturing	343	189	55%
Commercial banking	73	31	42
Retail trade	38	15	39
Insurance: stock	22	8	36
Gas and electric utilities	13	4	31
Construction: publicly held	13	6	46

Again, the SAR is not given to all nonqualified option recipients. For example, among the manufacturers, 55 percent of the nonqualified plans with SAR's limit the SAR to a small group of top executives; 42 percent of the banks also limit SAR's to the insider group.

Executive Pay and Company Size

As a rule, top executives in larger companies are paid more than their counterparts in smaller companies. It is generally accepted that this is a cause-and-effect relationship. The chief executive officer of a large company is paid more than a CEO in a small company in part because the job is more difficult and demanding.

In this study, major emphasis is given to this relationship between top executive pay and the size of the company. For example, the total compensation (base salary plus bonus award) of the chief executive officers in each type of business is shown on a chart similar to Exhibit 1 on page 6.

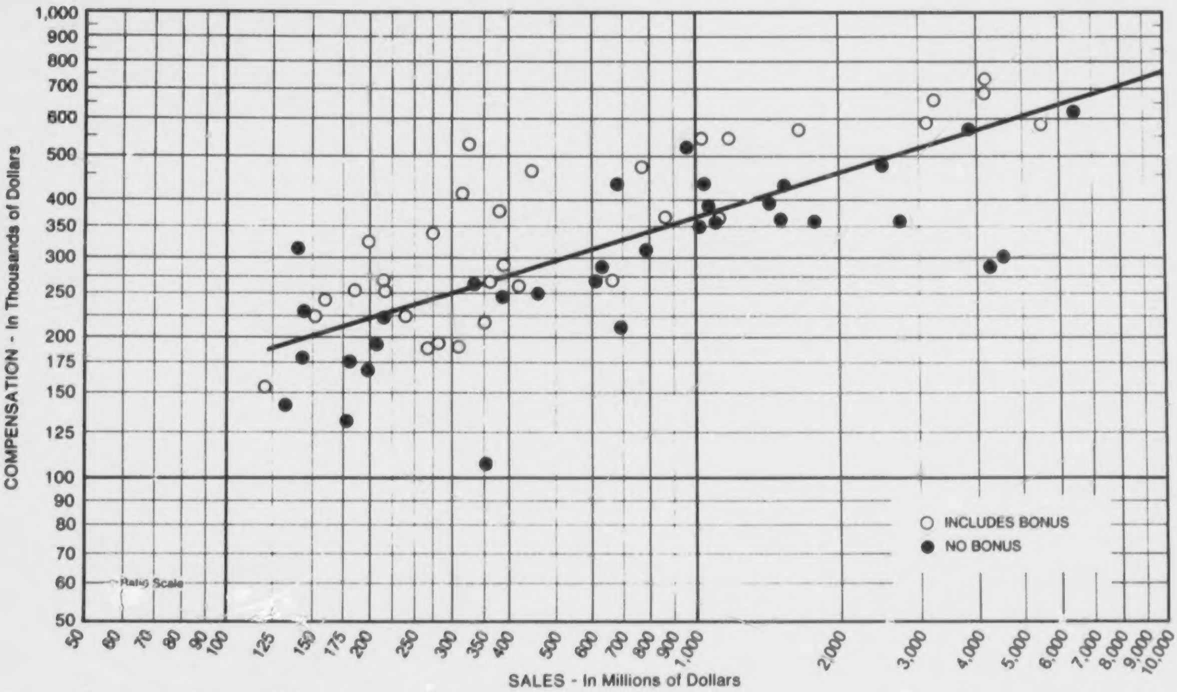
- Each circle on a chart shows the total compensation paid to the chief executive officer by a single company. Those executives whose total compensation includes a bonus award are differentiated by a circle(O).
- The regression line on a chart measures the general relationship between total compensation and company size. The line can be used to determine average compensation of chief executives at any level of company size by taking a direct reading from the chart, or by using the formula given for each line.

For example, the formula for the line in Exhibit 1 is log Y = 1.6557 + 0.3025X, where Y is total compensation (in thousands) and X is sales (in millions). To find average total compensation of chief executives with sales of $500 million, for example, the logarithm of 500 (2.6990) is multiplied by 0.3025, and this product (0.8164) is added to 1.6557 to get the logarithm (2.4721) of Y (compensation) which is 297. Thus, average total compensation for chief executive officers in companies with sales of $500 million is almost $300,000.

Although total compensation and company size are highly related, company size obviously is not the sole determinant of top-executive compensation. To underline this point, the "coefficient of determination" is given for each regression line. This is the ratio of the variation in total compensation explained by the regression line to the total variation in pay. (The square root of this coefficient is the more familiar correlation coefficient.)

As the tabulation below, using pay of the CEO, indicates, this coefficient of determination varies considerably from one type of business to another. For example, for the relatively small construction companies whose stock is not traded, only 15 percent of the variation in total compensation of chief executive officers is accounted for by the variation in company size. But for most types of business, at least half of the variation in chief executive pay, whether total compensation or base salary, is statistically explained by the variations in company size.

Exhibit 1: Compensation of the Chief Executive, by Company Sales



*One company with sales over $10 billion not plotted

Type of Business	Coefficient of Determination	
	Total Compensation	Base Salary
Gas and electric utilities	70%	69%
Life insurance	66	64
Construction: publicly held	66	52
Commercial banking	65	67
Manufacturing	59	63
Retail trade	52	55
Property and casualty insurance	42	39
Construction: closely held	15	13

It might be noted that the coefficients of determination are generally somewhat higher for the other four executives; that is, their pay is more influenced by company size. Generally, the coefficients are four to 12 percentage points higher than that of the CEO, depending on the type of business, but they are 20 percentage points higher for the closely held construction companies.

Executive Pay Differentials

Although average pay levels for each of the five top-paid executives vary considerably from one type of business to another, the relationships among the pay of the five executives differ very little among the major types of business. For example, the second highest paid executive typically receives 67 to 78 percent of the chief executive's total compensation, as the tabulation below illustrates.

Type of Business	Median Ratio: Total Compensation as a Percentage of CEO Total Compensation			
	Second highest	Third highest	Fourth highest	Fifth highest
Retail trade	78%	62%	53%	44%
Construction	72	56	51	46
Manufacturing	71	56	48	44
Commercial banking	69	54	47	44
Gas and electric utilities	68	55	51	46
Insurance	67	56	49	42

Salary ratios among the five top-paid are essentially the same as total compensation ratios, as shown below.

Type of Business	Median Ratio: Salary as a Percentage of CEO Salary			
	Second highest	Third highest	Fourth highest	Fifth highest
Retail trade	78%	60%	53%	45%
Construction	74	61	53	49
Manufacturing	72	56	50	45
Commercial banking	70	54	48	44
Insurance	68	56	49	44
Gas and electric utilities	68	56	51	46

Chapter 2

Manufacturing—Summary

INFORMATION ABOUT THE 1982 compensation of their five highest paid executives was obtained from 510 manufacturers, 53 percent of the 966 manufacturers included among the 1982 *Fortune* 1,000 largest industrials. These 510 manufacturers are classified below on the basis of 1982 sales volume.

1982 Sales	*Companies* *Number*	*Percent*
$5 billion and over	59	12%
2 - 4,999 billion	83	16
1 - 1,999 billion	70	14
500 - 999 million	90	17
300 - 499 million	73	14
200 - 299 million	60	12
100 - 199 million	75	15
Total	510	100%

Median sales for the group is $689 million, with the middle half ranging between $275 million and $2.3 billion.

Compensation Changes

On the average, total compensation for 1982 (which includes bonus awards) was about the same in 1981 for top executives in these manufacturing industries. For example, in a sample of 392 chief executive officers for whom total compensation for both 1981 and 1982 was available, the median change in total compensation was zero, with the middle half ranging from a cut of 17 percent to an increase of 13 percent.

There is considerable variation, however, in total compensation change among the specific manufacturing industries. For example, total compensation for 1982 was about 5 percent greater than for 1981 in food and electrical machinery but was practically unchanged in stone, clay and glass, industrial chemicals, and transportation equipment. Total 1982 compensation was lower than 1981 total compensation in fabricated metals (–6 percent), paper (–7 percent), machinery (–9 percent), and primary metals (–15 percent).

Much of the drop in 1982 total compensation is the result of fewer manufacturers paying a bonus than in 1981; only 71 percent paid a bonus for 1982 performance compared to 83 percent for 1981. Furthermore, those industries with an appreciable drop in 1982 total compensation also include the largest drop in the number of companies that paid a bonus (see page 10). In addition, 1982 total compensation is off because, among the companies that did pay a bonus, the size of the 1982 awards, as a percentage of salary, was significantly lower than 1981 awards.

Base salaries for 1982 were up 9 percent over 1981, a significant drop in the rate of salary increases. As indicated below, salary increases for the chief executive officer position averaged about 12 percent during 1980 and 1981.[1]

Year	*Number of Companies*	*Percentage Increase in Salary* *Median*	*Middle 50 Percent Range*
1982	392	9%	0% to 15%
1979 - 1981	323	24	16 to 33
1977 - 1979	388	20	10 to 29
1975 - 1977	549	20	11 to 28
1973 - 1975	502	17	5 to 26

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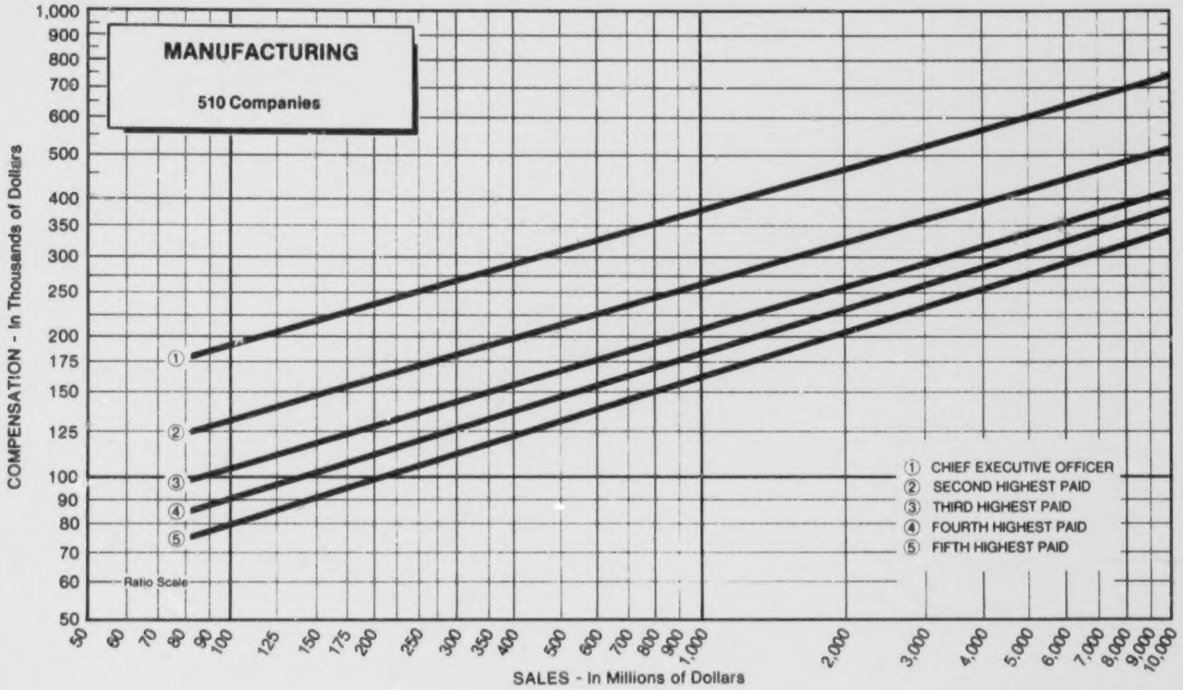
[1] The 1979-1981 changes are from Harland Fox, *Top Executive Compensation 1982 Edition.* The Conference Board, Report No. 827, 1982, p. 11. The 1977-1979 changes are from *Top Executive Compensation 1980 Edition.* The Conference Board, Report No. 793, 1980, p. 14. The 1975-1977 changes are from *Top Executive Compensation 1978 Edition.* The Conference Board, Report No. 753, 1978, p. 18. The 1973-1975 changes are from *Top Executive Compensation 1976 Edition.* The Conference Board, Report. No. 706, 1976, p. 17.

Chart 1: Compensation of the Five Highest Paid Executives, by Company Sales



1982 Total Compensation

For each manufacturer, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The median and middle 50-percent range of the total compensation of the chief executive officers and the other four executives are shown below.

Compensation Rank	*1982 Total Compensation* *Median*	 *Middle 50 Percent Range*
Highest paid	$350,000	$247,000 to $520,000
Second	$249,000	$168,000 to $363,000
Third	$196,000	$133,000 to $282,000
Fourth	$170,000	$119,000 to $241,000
Fifth	$150,000	$104,000 to $215,000

As the lines in Chart 1 suggest, there is a positive relationship between the level of total compensation and sales volume for all five executives. The correlation coefficients for the five lines are, respectively: .77, .79, .81, .82, and .82.

The regression lines on the chart can be used to determine the average compensation of an executive at any level of sales, either by a direct reading from the chart or by using the regression formulas below. (In these formulas, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.)

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7085 + 0.2881 \log X$	59%
Second...........	$\log Y = 1.5271 + 0.2948 \log X$	62
Third............	$\log Y = 1.4235 + 0.2978 \log X$	65
Fourth...........	$\log Y = 1.3462 + 0.3039 \log X$	67
Fifth	$\log Y = 1.2944 + 0.3042 \log X$	67

Although total compensation and sales are highly related, company size is not the sole determinant of compensation level. As the "coefficients of determination" (r^2) above indicate, the variation in sales statistically explains 59 to 67 percent of the variation in total compensation of the five top-paid executives. (This coefficient is the square of the correlation coefficient.)

The tabulation below of the total compensation of chief executive officers indicates that this coefficient of determination varies considerably among the 12 specific industries.

Industry	*Coefficient of Determination (Chief Executive Officers)*
Consumer chemicals	73%
Electrical machinery	69
Food	65
Industrial chemicals	64
Machinery	60
All Manufacturers	**59**
Stone, clay and glass	58
Primary metals	57
Transportation equipment	56
Paper	54
Fabricated metals	52
Printing and publishing	40
Textiles	36

As a rule, the coefficient of determination is higher for the other four executives: The largest coefficient is 6 to 22 percentage points greater than that for the chief executive officer, depending on the industry.

There are substantial differences in the average total compensation of each of the five top-paid executives from one industry to another, even when sales volume is taken into consideration. This is illustrated in the tabulation below, which shows average total compensation of chief executive officers, by industry, at sales of $689 million, the median sales volume for all manufacturers.

Industry	*Total Compensation (Chief Executive Officers)*
Consumer chemicals	$403,000
Printing and publishing	385,000
Electrical machinery	367,000
Industrial chemicals	353,000
Fabricated metals	353,000
Transportation equipment	342,000
Textiles	338,000
All Manufacturers	**336,000**
Food	328,000
Machinery	327,000
Stone, clay and glass	303,000
Primary metals	285,000
Paper	280,000

When sales volume is taken into consideration, these industry differences apparently are growing wider because of the differential impact of the recession. The highest industry average above is 44 percent greater than the lowest; in 1981 this spread was 37 percent. But in 1979, the spread was 24 percent and, if the lowest paying industry is dropped, the 1979 difference was only 10 percent.

The ratio of the total compensation of each executive to that of the CEO is shown below.

Compensation Rank	*Total Compensation as a Percentage of Chief Executive's Total Compensation* — *Median*	*Middle 50 Percent Range*
Second highest	71%	61% to 81%
Third highest	56	48 to 64
Fourth highest	48	41 to 57
Fifth highest	44	37 to 52

1982 Salary

There is also a positive relationship between base salary and sales volume. The regression equations for the five top-paid executives are shown below. (Y is salary stated in *thousands* of dollars; X is sales stated in *millions* of dollars.)

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7379 + 0.2400 \log X$	63%
Second	$\log Y = 1.5579 + 0.2482 \log X$	62
Third	$\log Y = 1.4378 + 0.2563 \log X$	66
Fourth	$\log Y = 1.3703 + 0.2614 \log X$	70
Fifth	$\log Y = 1.3305 + 0.2613 \log X$	68

As the coefficients of determination (r^2) above indicate, the variation in sales volume statistically explains 62 to 70 percent of the variation in base salary.

The coefficient of determination varies considerably for the base salary of CEO's among the 12 specific manufacturing industries:

Industry	*Coefficient of Determination (Chief Executive Officers)*
Primary metals	82%
Electrical machinery	73
Industrial chemicals	72
Consumer chemicals	72
Fabricated metals	70
Food	66
Stone, clay and glass	64
All Manufacturers	**63**
Transportation equipment	62
Machinery	53
Paper	52
Textiles	35
Printing and publishing	28

There is relatively little difference in average base salary of each of the five top-paid executives from one industry to another, when sales volume is taken into consideration. This is illustrated below using the average salary of chief executive officers in each industry at sales of $689 million, the median sales volume of all manufacturers. (These averages are derived from the regression equations for each industry.) The highest average base salary is only 15 percent greater than the lowest.

Industry	*Base Salary (Chief Executive Officers)*
Industrial chemicals	$281,000
Consumer chemicals	278,000
Fabricated metals	277,000
Printing and publishing	275,000
Machinery	270,000
Primary metals	270,000
All Manufacturers	**263,000**
Textiles	261,000
Electrical machinery	259,000
Stone, clay and glass	257,000
Paper	251,000
Food	249,000
Primary metals	242,000

The ratio of the salary of each of the other top-paid executives to the salary of the chief executive officer is shown below.

	Salary as a Percentage of Chief Executive's Salary	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	71%	59% to 80%
Third highest	55	48 to 65
Fourth highest	49	42 to 57
Fifth highest	46	38 to 53

These ratios are practically the same as the total compensation ratios.

1982 Bonus Awards

Almost 94 percent (477) of the 510 manufacturers have an "annual" executive bonus plan; that is, a plan that pays a year-end bonus based on that year's corporate performance. The incidence of these plans varies somewhat from industry to industry, but at least 80 percent of the companies in any manufacturing industry have a plan.

There is no consistent relationship between company size and the prevalence of these plans: Better than 90 percent of the companies at any sales level have a plan.

There has been considerable growth in the prevalence of these plans over the last decade. In 1972, only two thirds of a comparable group of manufacturers reported an annual bonus plan.[2] By 1980, 90 percent did so.[3]

Three-fourths (361) of the 477 manufacturers with a bonus plan made an award for 1982 performance; 89 percent paid a bonus for 1981, however. Among the 361 companies that paid a 1982 bonus, most (343) also paid a 1981 bonus, but 18 did not. Among the 116 companies that paid no bonus for 1982, 80 paid a 1981 bonus; 36 paid no bonus in either year.

By and large, the proportion of companies in the specific manufacturing industries that paid a bonus for 1982 performance is smaller than the percentage that paid a 1981 bonus, as shown below.

	Total With Bonus Plan	*Paid Bonus for 1982*		*Paid Bonus for 1981*
Industry		*Number*	*Percent*	*Percent*
Consumer chemicals ..	22	21	96%	96%
Printing and publishing	20	18	90	100
Food	42	37	88	88
Electrical machinery ..	42	33	79	93
Transportation equipment	47	37	79	85
Fabricated metals	23	18	78	96
Industrial chemicals ..	40	31	78	85
Textiles	24	18	75	79
All Manufacturers....	**477**	**361**	**75**	**89**
Stone, clay and glass ..	22	16	73	82
Machinery	60	41	68	87
Paper	23	15	65	83
Primary metals	29	14	48	90

The median award for 1982 performance for 1,729 executives in the 356 companies that paid a bonus is 37 percent of base salary, with the middle half ranging from 24 to 55 percent of salary. As Table 3 indicates, the median award for CEO's (45 percent of salary) is somewhat higher than that for the other four executives (32 to 39 percent of salary). Compared to bonus awards for 1981, the 1982 medians are 5 to 10 percentage points lower.[4]

For each of the five executives the bonus award as a percentage of salary increases with company size (Table

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[2] *Top Executive Compensation 1972 Edition.* (out of print.) The Conference Board, Report No. 573, 1972, p. 12.

[3] *Top Executive Compensation 1980 Edition,* p. 11.

[4] *Top Executive Compensation 1982 Edition,* p. 12.

Table 3: 1982 Bonus Awards and 1981 Median Bonus

1982 Bonus Award (Percent of Salary)	Chief Executives		Second Highest Paid		Third Highest Paid		Fourth Highest Paid		Fifth Highest Paid	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
100% or more	27	8%	21	6%	19	5%	20	6%	14	4%
90-99	8	2	8	2	6	2	3	1	6	2
80-89	14	4	10	3	11	3	11	3	3	1
70-79	20	6	16	5	16	4	12	3	15	4
60-69	32	10	23	7	25	7	16	4	15	4
50-59	36	11	44	13	36	10	37	10	27	8
40-49	53	17	47	14	49	14	48	13	42	12
30-39	48	15	69	20	75	20	59	17	69	20
20-29	48	15	49	14	64	18	85	25	74	23
10-19	24	7	35	10	43	12	44	12	52	15
Less than 10%	18	5	20	6	18	5	22	6	23	7
Total	328	100%	342	100%	362	100%	357	100%	340	100%
Median Bonus	45%		39%		36%		33%		32%	
Middle 50% Range	28-65%		24-57%		24-55%		24-55%		21-48%	
Median Salary	$295,000		$195,000		$156,000		$137,000		$126,000	
1981 Median Bonus	**50%**		**48%**		**43%**		**43%**		**40%**	

4, p. 13).[5] Again, the 1982 medians at each size level are 4 to 7 percentage points lower than in 1981.[6]

Restricted Stock Plans

Twenty-seven percent (137) of the manufacturers have a restricted stock plan under which contingent grants of company stock are made, subject to restrictions and forfeitures, until earned out by continued employment over a specified period of time. The use of restricted stock has increased somewhat in the past three years; 18 percent (83) of a comparable group of (470) manufacturers reported a plan in 1980.[7]

The prevalence of these plans is not related to company size, but it varies considerably among the 12 specific manufacturing industries, as shown below.

Industry	*Total Companies*	*With Restricted Stock Plan*	
		Number	*Percent*
Textiles	25	12	48%
Consumer chemicals	23	10	44
Fabricated metals	23	8	35
Industrial chemicals	42	14	33
Transportation equipment	47	15	32
Printing and publishing	25	7	28
All manufacturing	**510**	**137**	**27**
Machinery	66	17	26
Electrical Machinery	43	10	23
Primary metals	30	5	17
Food	47	8	17
Stone, clay and glass	25	4	16
Paper	27	3	11

Long-term Performance Plans

One-third (169) of the 510 manufacturers have an executive incentive plan based on the achievement of long-term corporate financial goals, usually called a **performance share or unit plan.**[8] This compares with only 15

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[5] Data are derived from regression equations based on the pay of executives in 356 companies with a bonus plan that paid a bonus. The equations are shown below; the coefficient of determination is in parentheses.

Total Compensation

Highest paid	$\log Y = 1.7962 + 0.2846 \log X$	(67%)
Second	$\log Y = 1.6129 + 0.2857 \log X$	(67%)
Third	$\log Y = 1.4803 + 0.2949 \log X$	(69%)
Fourth	$\log Y = 1.4161 + 0.2978 \log X$	(72%)
Fifth	$\log Y = 1.3521 + 0.3034 \log X$	(72%)

Base Salary

Highest paid	$\log Y = 1.7428 + 0.2437 \log X$	(66%)
Second	$\log Y = 1.5817 + 0.2424 \log X$	(63%)
Third	$\log Y = 1.4448 + 0.2553 \log X$	(68%)
Fourth	$\log Y = 1.3857 + 0.2593 \log X$	(72%)
Fifth	$\log Y = 1.3410 + 0.2615 \log X$	(71%)

[6] *Top Executive Compensation 1982 Edition,* p. 13.

[7] *Top Executive Compensation 1980 Edition,* p. 14. See also, Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review,* First Quarter, 1981, p. 30.

[8] For an analysis of these plans, see Laurence C. Bickford, "Long-term Incentive for Management Part 6: Performance Attainment Plans." *Compensation Review,* Third Quarter, 1981, p. 18; and Harland Fox, *Executive Incentives: Long-term Performance Share/Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

percent of 746 manufacturers that reported a plan in 1978.[9]

These plans are most common among larger companies. For example, 53 percent of the manufacturers with $3 billion or more in sales have a plan compared with 35 percent with sales in the $300 million to $3 billion range, and 13 percent of the companies with sales in the $100 million to $300 million range.

The prevalence of these plans also varies considerably among the specific industries, as shown below.

Industry	*Total Companies*	*With Long-term Performance Plan*	
		Number	*Percent*
Stone, clay and glass	25	14	56%
Industrial chemicals.......	42	21	50
Fabricated metals.........	23	10	44
Textiles	25	11	44
Paper..................	27	11	41
Consumer chemicals	23	9	39
All manufacturers	**510**	**169**	**33**
Electrical machinery	43	14	33
Machinery.............	66	20	30
Printing & publishing......	25	7	28
Food	47	12	26
Transportation equipment..	47	10	21
Primary metals	30	5	17

Forty-four companies made a payment during 1982 to one or more of their five top-paid executives under this plan. The awards for 211 executives are shown below, converted to a percentage of their 1982 base salary.

Award as Percent of Salary	*Executives*	
	Number	*Percent*
200 - 230%	4	2%
100 - 199	28	14
80 - 99	21	10
60 - 79	23	11
40 - 59	26	12
30 - 39	26	12
20 - 29	21	10
10 - 19	32	15
Less than 10	29	14
Total.......................	210	100%

The median award is the equivalent of 38 percent of 1982 salary, with the middle half ranging between 16 and 80 percent of salary.

Stock Option Plans

Almost 80 percent (406) of the 510 manufacturers have a stock option plan.[10] These plans are somewhat more common in the largest companies; 94 percent of the companies with sales of $2 billion or over have a plan compared with 72 percent of companies smaller than this. The incidence of stock option plans varies somewhat among the specific manufacturing industries, but at least 60 percent of the companies in each industry has a plan, as shown below.

Industry	*Total Companies*	*With Stock Option*	
		Number	*Percent*
Electrical machinery	43	41	95%
Transportation equipment..	47	41	87
Stone, clay and glass	25	21	84
Fabricated metals.........	23	19	83
Consumer chemicals	23	19	83
All manufacturers	**510**	**406**	**80**
Primary metals	30	24	80
Machinery.............	66	53	80
Paper..................	27	21	78
Industrial chemicals.......	42	32	76
Printing and publishing	25	18	72
Food	47	31	66
Textiles	25	15	60

Two-thirds (270) of the companies with a plan provide for grants of *both* incentive stock options (ISO's) and nonqualified options; 15 percent (63) grant only ISO's, and 18 percent (73) only nonqualified options.

Two-thirds (268) of the 406 companies with a plan made a regular grant of stock options during 1982. Twenty-nine percent of the companies granted *only* ISO's; 16 percent *only* nonqualified options; and 55 percent granted *both* ISO's and nonqualified options. Among the 148 plans that granted both ISO's and nonqualified options, 109 (74 percent) limited nonqualified options to those executives who hit the $100,000 limit on ISO grants.

Most (230) of the 268 manufacturers that granted options in 1982 provided information about the value of the option for one or more of their five top-paid executives. (The value of an option is the number of shares multiplied by the market price at the time of grant.) The size of the options for 1,116 executives is shown below, converted to a percentage of 1982 base salary.

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[9] *Top Executive Compensation 1978 Edition*, p. 13.

[10] For an analysis of 189 ISO plans, see Harland Fox, *Incentive Stock Option Plans*. The Conference Board, Research Bulletin No. 148, 1983.

Value of Option (Percent of Salary)	*Executives*	
	Number	*Percent*
400% or more	35	3%
300 - 399	34	3
200 - 299	64	6
150 - 199	102	9
100 - 149	186	17
75 - 99	165	15
50 - 74	212	19
25 - 49	237	21
Less than 25%	81	7
Total	1,116	100%

The median value of the option grant for these executives is 79 percent of base salary with the middle half ranging between 47 and 133 percent of salary. The median grant to the chief executive officers (85 percent of salary) and the second highest paid (83 percent) is somewhat higher than that for the third-highest paid (79 percent) and the other two executives (72 percent of salary).

Stock-for-stock exercise (stock swaps) are provided for by 66 percent (220) of the 333 companies that grant ISO's, and by 60 percent (206) of the 343 plans that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by 39 percent (131) of the 333 plans that grant ISO's. Most plans, 60 percent, limit SAR's to a small group of top management (essentially, "insiders"); the other 40 percent grant SAR's to all ISO recipients.

Table 4: 1982 and 1981 Bonus Awards as Percent of Salary, by Company Size

	Sales Volume		
Executive	*$275 Million*	*$730 Million*	*$2.2 Billion*
Chief Executive			
1982 Bonus (%)	42%	48%	55%
Salary	$217,000	$276,000	$361,000
1981 Bonus (%)	49%	54%	61%
Second Highest Paid			
1982 Bonus (%)	37%	43%	50%
Salary	$149,000	$189,000	$246,000
1981 Bonus (%)	44%	50%	56%
Third Highest Paid			
1982 Bonus (%)	35%	41%	47%
Salary	$117,000	$150,000	$199,000
1981 Bonus (%)	41%	46%	52%
Fourth Highest Paid			
1982 Bonus (%)	34%	39%	44%
Salary	$104,000	$134,000	$179,000
1981 Bonus (%)	39%	45%	50%
Fifth Highest Paid			
1982 Bonus (%)	31%	35%	41%
Salary	$95,000	$123,000	$164,000
1981 Bonus (%)	35%	41%	48%

SAR's are provided by 55 percent (189) of the 343 plans that grant nonqualified options. Most plans (58 percent) limit SAR's to a small group of top management; the other 42 percent grant SAR's to all nonqualified option recipients.

Chapter 3

Manufacturing—Individual Industries

Food and Kindred Products

This industry includes manufacturers and processors of food and beverages for human consumption, and related products such as confections, fats and oils, and animal feeds. (SIC: 20)

The Companies

Executive compensation data for this industry were obtained from 47 companies, classified below according to 1982 sales volume. The smallest company had sales of $111 million; the largest $7.5 billion.

1982 Sales	*Number of Companies*
$5 billion and over	5
2 - 4,999 billion	9
1 - 1,999 billion	6
500 - 999 million	10
300 - 499 million	7
200 - 299 million	6
100 - 199 million	4
Total	47

Median Sales:
$719 million

Middle 50 percent:
$318 million to
$3.0 billion

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 47 companies is plotted in Chart 2. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$341,000	$250,000 to $625,000
Second	240,000	153,000 to 385,000
Third	202,000	105,000 to 317,000
Fourth	162,000	93,000 to 243,000
Fifth	145,000	85,000 to 218,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	69%	55% to 82%
Third highest	53	46 to 62
Fourth highest	47	37 to 53
Fifth highest	42	32 to 47

As the lines on Chart 3 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.4496 + 0.3755 \log X$	65%
Second	$\log Y = 1.2094 + 0.3935 \log X$	66
Third	$\log Y = 1.0441 + 0.4173 \log X$	71
Fourth	$\log Y = 1.0019 + 0.4070 \log X$	70
Fifth	$\log Y = 0.9758 + 0.3990 \log X$	71

Chart 2: Compensation of the Chief Executive, by Company Sales

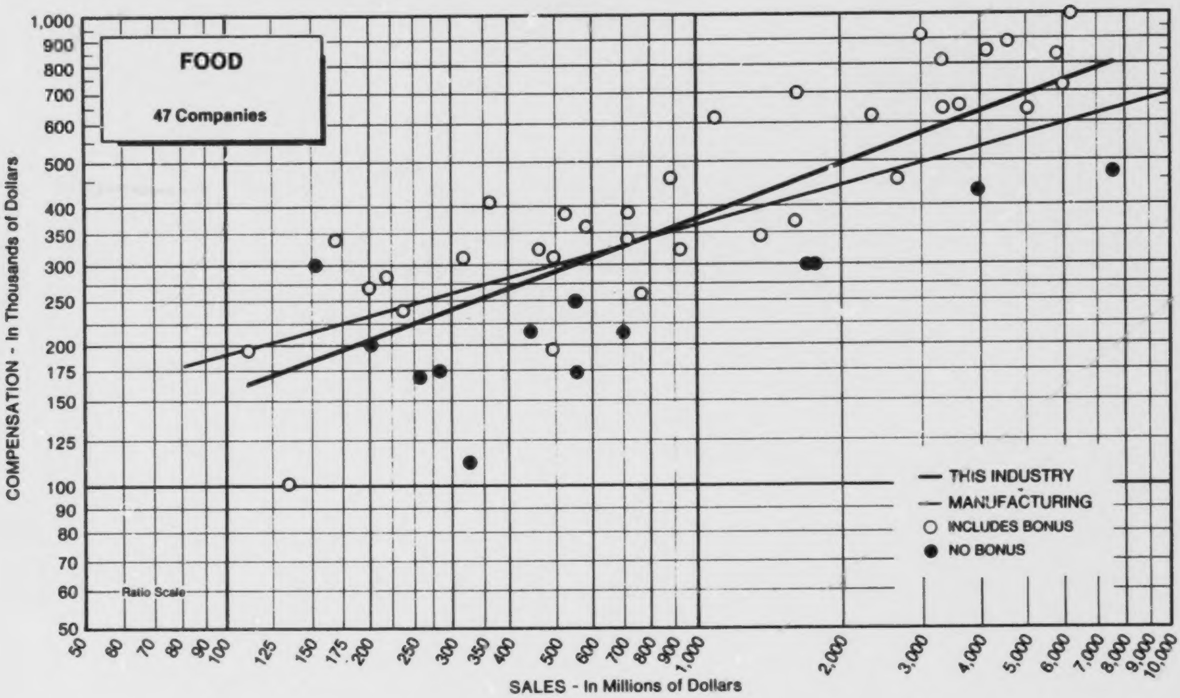
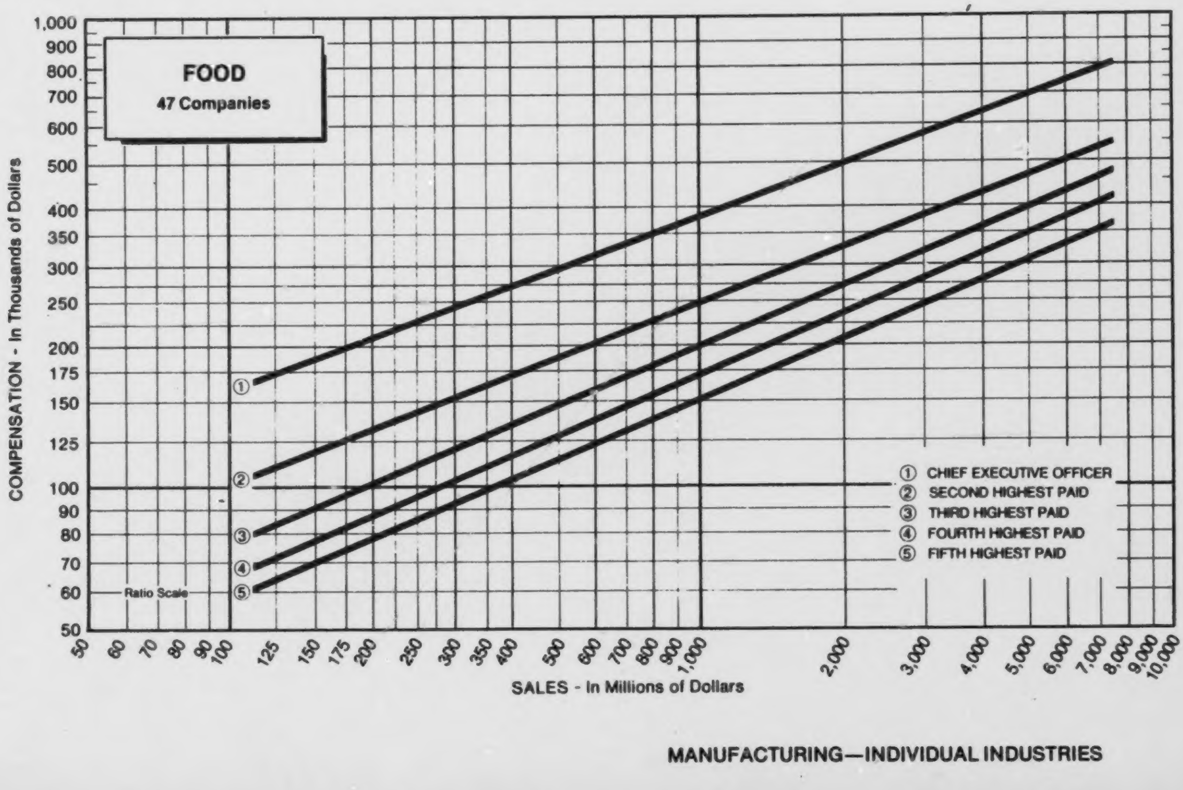


Chart 3: Compensation of the Five Highest Paid Executives, by Company Sales



In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.5742 + 0.2893 \log X$	66%
Second	$\log Y = 1.2787 + 0.3285 \log X$	72
Third	$\log Y = 1.1539 + 0.3382 \log X$	73
Fourth	$\log Y = 1.1056 + 0.3302 \log X$	75
Fifth	$\log Y = 1.0792 + 0.3283 \log X$	71

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Forty-two (89 percent) of the 47 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Thirty-seven (88 percent) of these companies made a bonus award for 1982 performance; most (34) also paid a bonus for 1981. Among the five companies that did not pay a bonus for 1982, three paid a bonus for 1981 performance, but the other two paid no bonus in either year.

Twelve (26 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Eight (17 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Thirty-one (66 percent) of the companies have a **stock option plan.** Sixteen of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; eight grant only ISO's, and seven only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 20 (83 percent) of the 24 companies that grant ISO's, and by 15 (65 percent) of the 23 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by ten (42 percent) of the 24 companies that grant ISO's. Most (seven) limit SAR's to a small group of top management (essentially, "insiders"); the other three plans grant SAR's to all ISO recipients.

SAR's are provided by 12 (52 percent) of the 23 companies that grant nonqualified options. Most (9) limit SAR's to a small group of top management; the other three plans grant SAR's to all nonqualified option recipients.

Textile Mill Products

This industry includes processors of natural and synthetic fibers; manufacturers of fabrics, rugs, carpets, felt products and related textiles. (SIC: 22)

The Companies

Executive compensation data for this industry were obtained from 25 companies, classified below according to 1982 sales volume. The smallest company had sales of $129 million; the largest, $2.9 billion.

1982 Sales	*Number of Companies*
$1 billion and over......	4
500 - 999 million	10
300 - 499 million	5
200 - 299 million	4
100 - 199 million	2
Total	25

Median Sales:
$537 million
Middle 50 percent:
$347 million to
$870 million

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 25 companies is plotted in Chart 4. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$331,000	$260,000 to $418,000
Second	250,000	176,000 to 340,000
Third	200,000	144,000 to 255,000
Fourth	178,000	128,000 to 216,000
Fifth	156,000	117,000 to 196,000

Chart 4: Compensation of the Chief Executive, by Company Sales

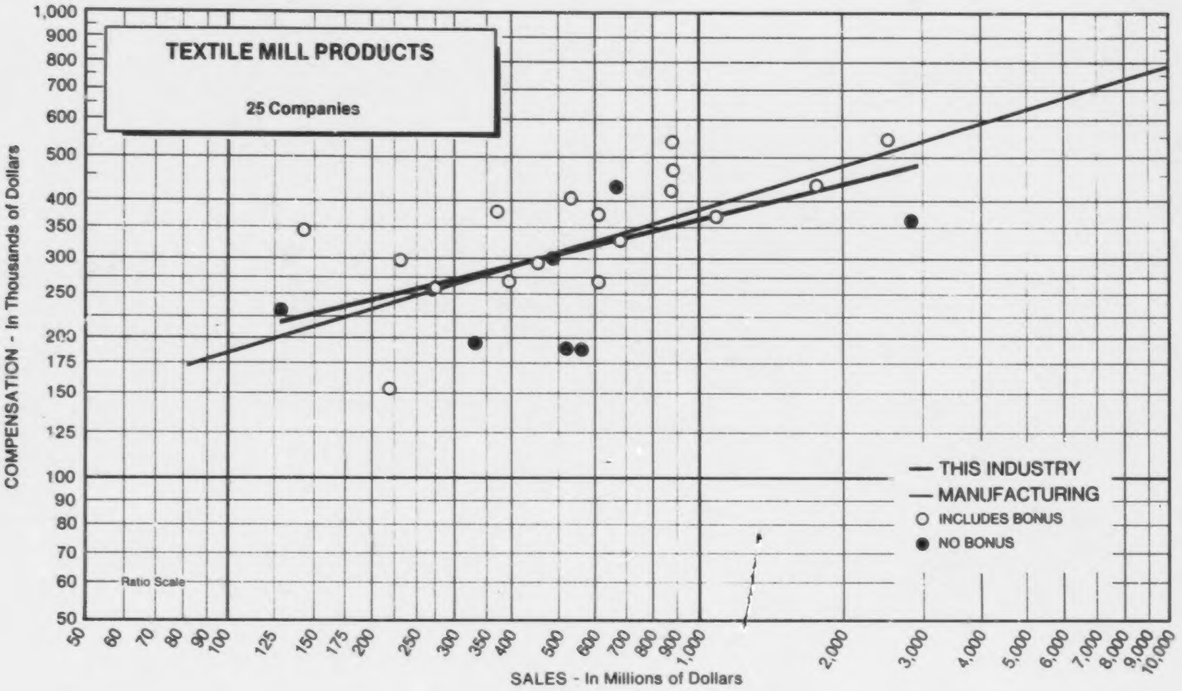
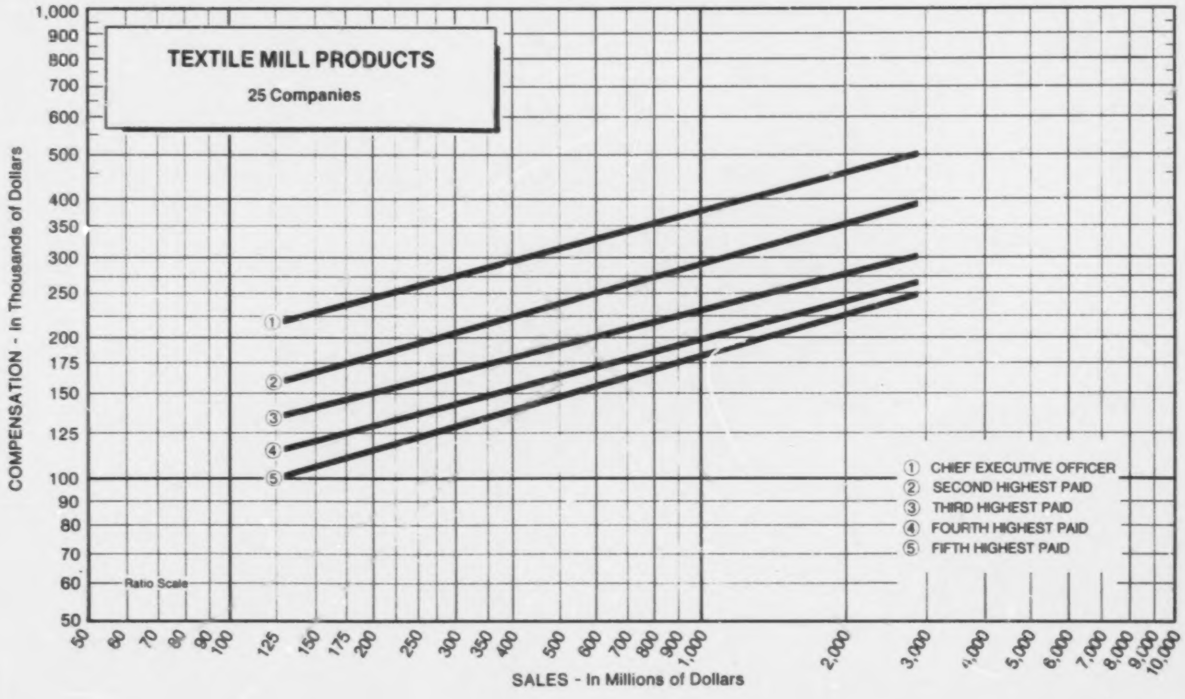


Chart 5: Compensation of the Five Highest Paid Executives, by Company Sales



The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	77%	70% to 86%
Third highest.	62	53 to 72
Fourth highest.	51	47 to 58
Fifth highest	46	42 to 57

As the lines on Chart 5 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7970 + 0.2578 \log X$	36%
Second.	$\log Y = 1.6026 + 0.2856 \log X$	37
Third	$\log Y = 1.5712 + 0.2625 \log X$	37
Fourth	$\log Y = 1.5095 + 0.2617 \log X$	42
Fifth	$\log Y = 1.4358 + 0.2737 \log X$	43

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.8197 + 0.2102 \log X$	35%
Second.	$\log Y = 1.6193 + 0.2413 \log X$	35
Third	$\log Y = 1.5889 + 0.2231 \log X$	38
Fourth	$\log Y = 1.5186 + 0.2220 \log X$	45
Fifth	$\log Y = 1.4281 + 0.2455 \log X$	47

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Twenty-four (96 percent) of the 25 companies have an **annual executive bonus plan**; that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Eighteen (75 percent) of these companies made a bonus award for 1982 performance; most (15) also paid a bonus for 1981. Among the six companies that did not pay a bonus for 1982, four paid a bonus for 1981 performance, but the other two paid no bonus in either year.

Eleven (44 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Twelve (48 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Fifteen (60 percent) of the companies have a **stock option plan.** Ten of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; two grant only ISO's, and three only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by eight of the 12 companies that grant ISO's, and by seven of the 13 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by five of the 12 companies that grant ISO's. Most (four) limit SAR's to a small group of top management (essentially, "insiders"); the other plan grants SAR's to all ISO recipients.

SAR's are provided by six of the 13 companies that grant nonqualified options. Most (four) limit SAR's to a small group of top management; the other two plans grant SAR's to all nonqualified option recipients.

Paper and Allied Products

This industry includes manufacturers and processors of paper, paperboard and pulp; and converted products such as bags, boxes and envelopes. (SIC: 26)

The Companies

Executive compensation data for this industry were obtained from 27 companies, classified below according to 1982 sales volume. The smallest company had sales of $103 million; the largest, $4.0 billion.

Chart 6: Compensation of the Chief Executive, by Company Sales

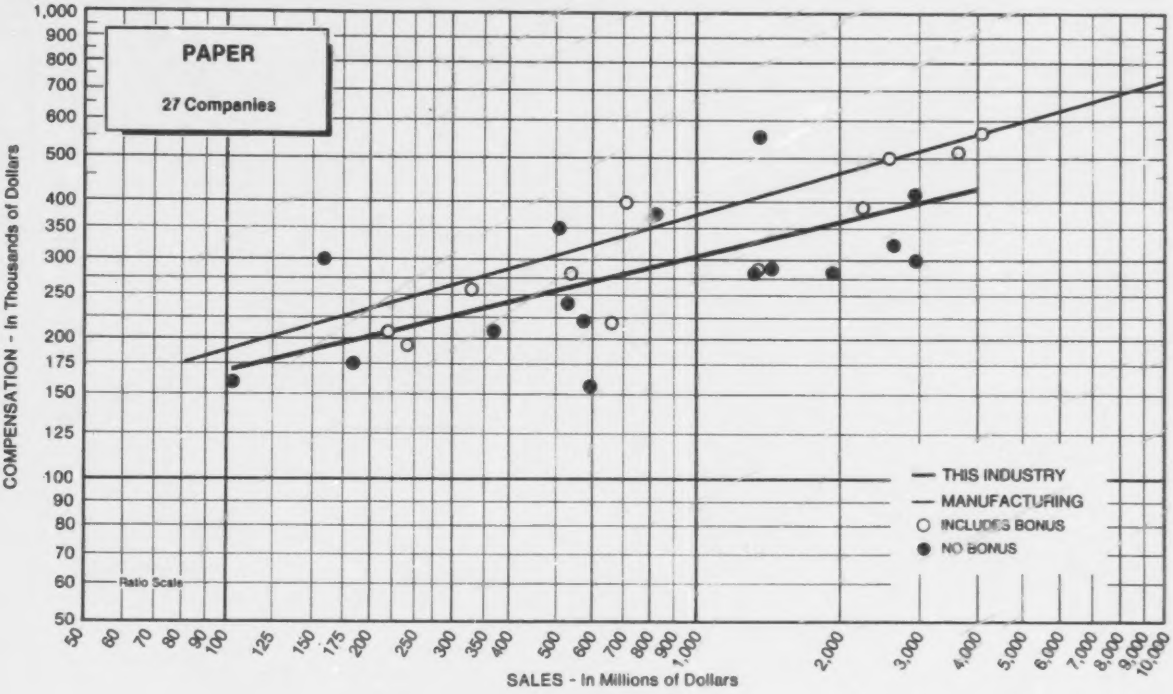
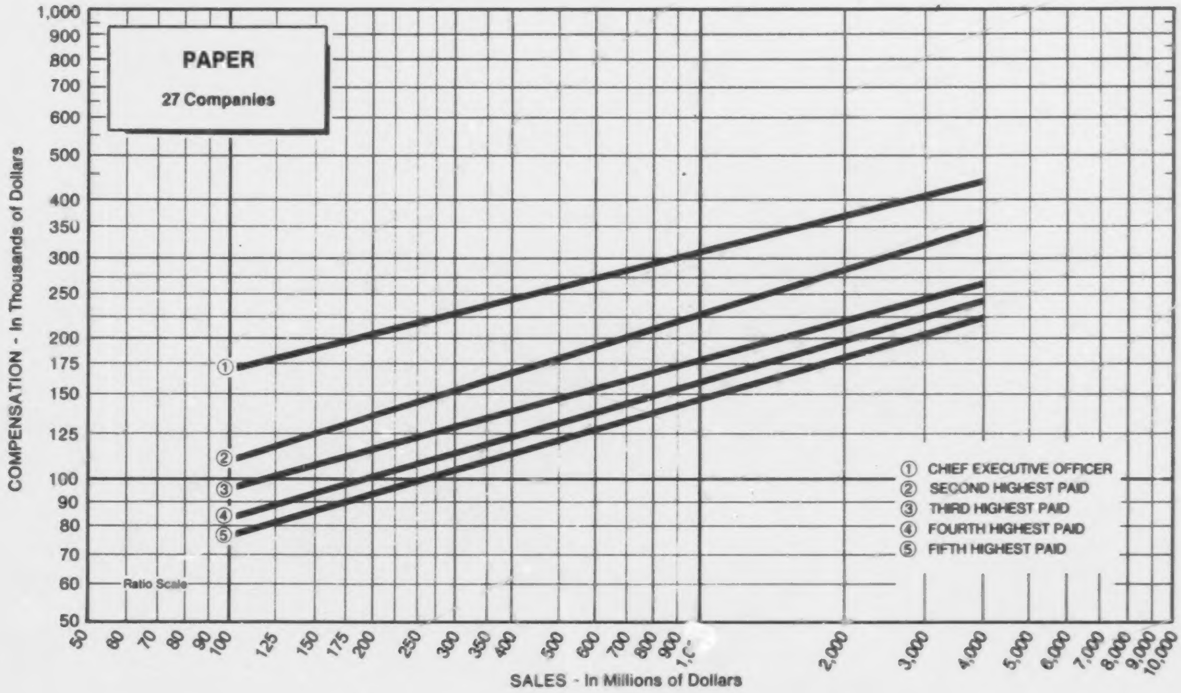


Chart 7: Compensation of the Five Highest Paid Executives, by Company Sales



1982 Sales	*Number of Companies*
$2 billion and over	7
1 - 1,999 billion	5
300 - 999 million	10
100 - 299 million	5
Total	27

Median Sales:
$712 million
Middle 50 percent:
$361 million to
$2.3 billion

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 27 companies is plotted in Chart 6. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$290,000	$218,000 to $393,000
Second	225,000	150,000 to 289,000
Third	175,000	129,000 to 225,000
Fourth	155,000	111,000 to 215,000
Fifth	140,000	98,000 to 205,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	72%	63% to 81%
Third highest	58	47 to 66
Fourth highest	50	41 to 58
Fifth highest	46	38 to 57

As the lines on Chart 7 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7246 + 0.2548 \log X$	54%
Second	$\log Y = 1.3928 + 0.3202 \log X$	64
Third	$\log Y = 1.4705 + 0.2583 \log X$	59
Fourth	$\log Y = 1.3624 + 0.2786 \log X$	70
Fifth	$\log Y = 1.3336 + 0.2768 \log X$	68

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7359 + 0.2337 \log X$	52%
Second	$\log Y = 1.3925 + 0.3030 \log X$	59
Third	$\log Y = 1.4284 + 0.2536 \log X$	50
Fourth	$\log Y = 1.4512 + 0.2277 \log X$	55
Fifth	$\log Y = 1.3011 + 0.2728 \log X$	67

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Twenty-three (85 percent) of the 27 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Fifteen (65 percent) of these companies made a bonus award for 1982 performance; most (13) also paid a bonus for 1981. Among the eight companies that did not pay a bonus for 1982, six paid a bonus for 1981 performance, but the other two paid no bonus in either year.

Eleven (41 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Three (11 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Twenty-one (78 percent) of the companies have a **stock option plan.** Thirteen of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; six grant only ISO's, and two only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by ten (53 percent) of the 19 companies that grant ISO's, and by eight (53 percent) of the 15 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by eight (42 percent) of the 19 companies that grant ISO's. Four limit SAR's to a small group of top management (essentially, "insiders"); the other four plans grant SAR's to all ISO recipients.

SAR's are provided by 11 (73 percent) of the 15 companies that grant nonqualified options. Most (7) limit SAR's to a small group of top management; the other four plans grant SAR's to all nonqualified option recipients.

Printing and Publishing

This industry includes companies engaged in printing by one or more of the common processes and companies engaged in publishing newspapers, books and periodicals. (SIC: 27)

The Companies

Executive compensation data for this industry were obtained from 25 companies, classified below according to 1982 sales volume. The smallest company had sales of $97 million; the largest, $3.5 billion.

1982 Sales	*Number of Companies*	
$1 billion and over	6	Median Sales:
500 - 999 million	4	$410 million
300 - 499 million	4	Middle 50 percent:
200 - 299 million	6	$209 million to
100 - 199 million	5	$1.3 billion
Total	25	

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 25 companies is plotted in Chart 8. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$400,000	$236,000 to $473,000
Second	275,000	155,000 to 400,000
Third	208,000	130,000 to 300,000
Fourth	180,000	105,000 to 279,000
Fifth	174,000	90,000 to 242,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	74%	62% to 83%
Third highest	58	50 to 70
Fourth highest	52	42 to 61
Fifth highest	44	35 to 57

As the lines on Chart 9 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7681 + 0.2879 \log X$	40%
Second	$\log Y = 1.2568 + 0.4227 \log X$	57
Third	$\log Y = 1.1546 + 0.4307 \log X$	61
Fourth	$\log Y = 1.0454 + 0.4502 \log X$	62
Fifth	$\log Y = 0.9634 + 0.4593 \log X$	61

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.8439 + 0.2100 \log X$	28%
Second	$\log Y = 1.4524 + 0.3069 \log X$	38
Third	$\log Y = 1.2961 + 0.3364 \log X$	50
Fourth	$\log Y = 1.1850 + 0.3551 \log X$	56
Fifth	$\log Y = 1.1035 + 0.3712 \log X$	49

Chart 8: Compensation of the Chief Executive, by Company Sales

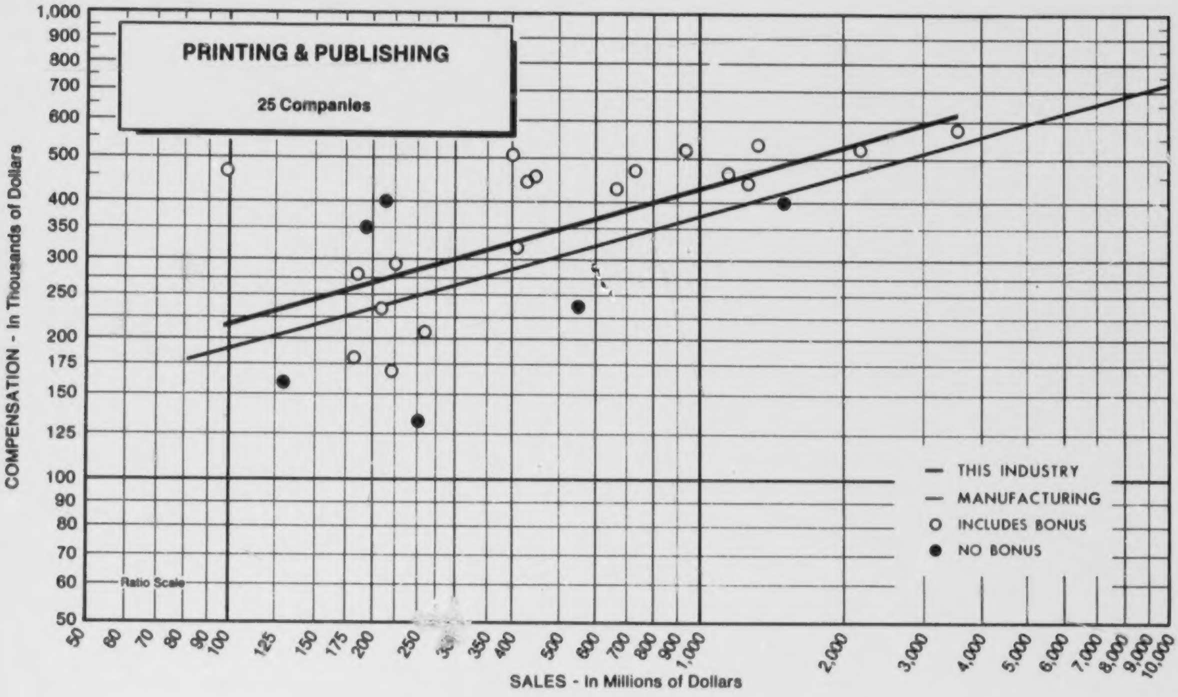
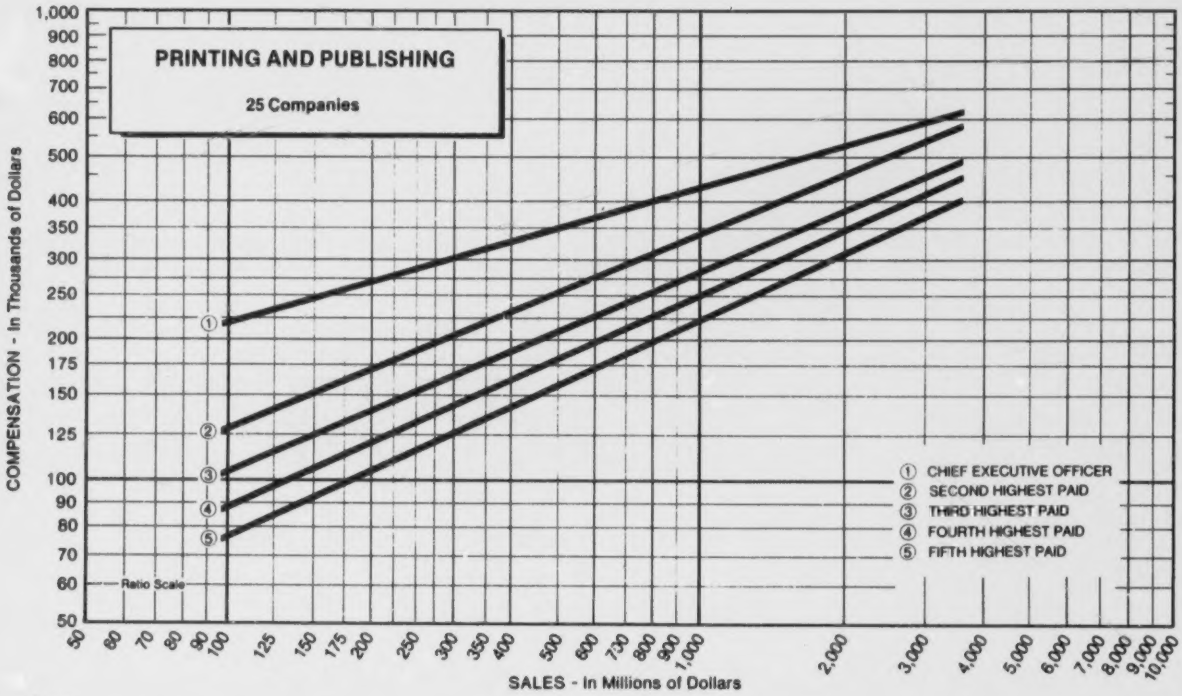


Chart 9: Compensation of the Five Highest Paid Executives, by Company Sales



Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Twenty (80 percent) of the 25 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Eighteen (90 percent) of these companies made a bonus award for 1982 performance; all of them also paid a bonus for 1981. The two companies that did not pay a bonus for 1982 paid a bonus for 1981 performance, however.

Seven (28 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Seven (28 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Eighteen (72 percent) of the companies have a **stock option plan.** Eleven of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; three grant only ISO's, and four only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 11 (79 percent) of the 14 companies that grant ISO's, and by 11 (73 percent) of the 15 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by six (43 percent) of the 14 companies that grant ISO's. Three limit SAR's to a small group of top management (essentially, "insiders"); the other three plans grant SAR's to all ISO recipients.

SAR's are provided by eight (53 percent) of the 15 companies that grant nonqualified options. Three limit SAR's to a small group of top management; the other eight plans grant SAR's to all nonqualified option recipients.

Industrial Chemicals

This industry includes producers of basic chemicals such as acids, alkalis, salts and organic chemicals and chemical products to be used in further manufacture such as synthetic fibers, plastics, dry colors and pigments. (SIC: 281, 282 and 285-289)

The Companies

Executive compensation data for this industry were obtained from 42 companies, classified below according to 1982 sales volume. The smallest company had sales of $125 million; the largest, $33 billion.

1982 Sales	*Number of Companies*	
$5 billion and over	8	Median Sales: $1.3 billion
2 - 4,999 billion	5	
1 - 1,999 billion	9	
500 - 999 million	10	Middle 50 percent: $485 million to $3.1 billion
100 - 499 million	10	
Total	42	

1982 Compensation

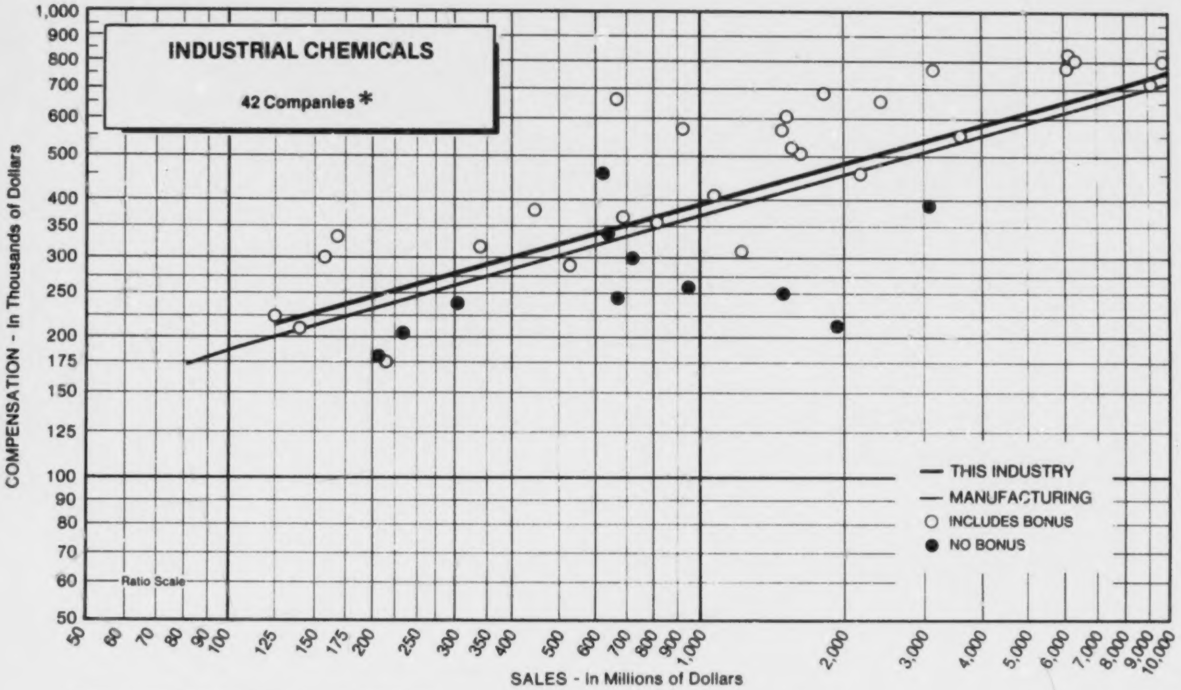
For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 42 companies is plotted in Chart 10. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$390,000	$300,000 to $605,000
Second	310,000	220,000 to 369,000
Third	215,000	180,000 to 290,000
Fourth	200,000	157,000 to 255,000
Fifth	177,000	134,000 to 235,000

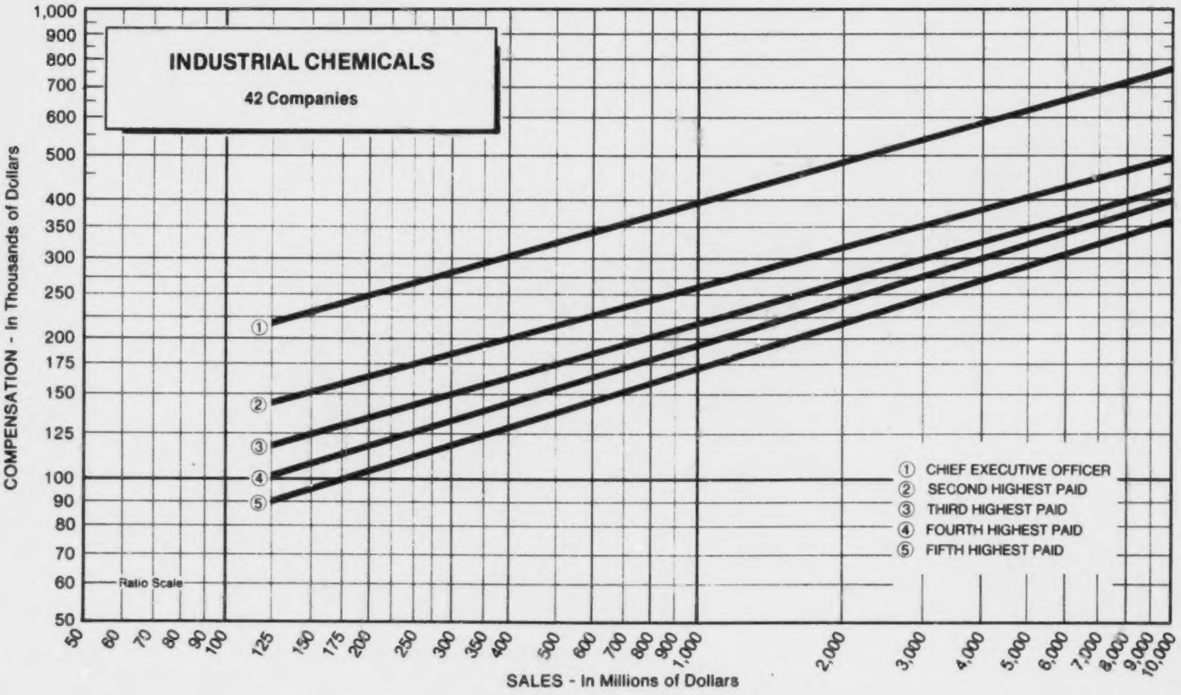
The ratio of the pay of each executive to that of the chief executive officer is shown below.

Chart 10: Compensation of the Chief Executive, by Company Sales



*Three companies with sales over $10 billion not plotted

Chart 11: Compensation of the Five Highest Paid Executives, by Company Sales



Compensation Rank	*Pay as Percentage of Chief Executive's Compensation*	
	Median	*Middle 50 Percent Range*
Second highest	70%	54% to 80%
Third highest	57	47 to 71
Fourth highest	51	39 to 59
Fifth highest	45	35 to 56

As the lines on Chart 11 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7455 + 0.2825 \log X$	64%
Second	$\log Y = 1.5589 + 0.2848 \log X$	66
Third	$\log Y = 1.4427 + 0.2962 \log X$	71
Fourth	$\log Y = 1.3909 + 0.2963 \log X$	75
Fifth	$\log Y = 1.3286 + 0.2995 \log X$	76

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7867 + 0.2331 \log X$	72%
Second	$\log Y = 1.6077 + 0.2328 \log X$	66
Third	$\log Y = 1.4800 + 0.2493 \log X$	71
Fourth	$\log Y = 1.4477 + 0.2442 \log X$	73
Fifth	$\log Y = 1.3832 + 0.2496 \log X$	74

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Forty (95 percent) of the 42 companies have an **annual executive bonus plan**; that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Thirty-one (78 percent) of these companies made a bonus award for 1982 performance; most (28) also paid a bonus for 1981. Among the nine companies that did not pay a bonus for 1982, seven paid a bonus for 1981 performance, but the other two paid no bonus in either year.

Twenty-one (50 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Fourteen (33 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Thirty-two (76 percent) of the companies have a **stock option plan.** Twenty-two of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; three grant only ISO's, and seven only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 20 (80 percent) of the 25 companies that grant ISO's, and by 17 (59 percent) of the 29 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by 15 (60 percent) of the 25 companies that grant ISO's. Most (9) limit SAR's to a small group of top management (essentially, "insiders"); the other six plans grant SAR's to all ISO recipients.

SAR's are provided by six of the 22 (76 percent) of the 29 companies that grant nonqualified options. Most (12) limit SAR's to a small group of top management; the other ten plans grant SAR's to all nonqualified option recipients.

Consumer Chemicals

This industry includes manufacturers of finished chemical products to be used for ultimate consumption such as drugs, soap and detergents and cleaning preparations, perfumes, cosmetics and other toilet preparations. (SIC: 283 and 284)

The Companies

Executive compensation data for this industry were obtained from 23 companies, classified below according to 1982 sales volume. The smallest company had sales of $153 million; the largest, $5.8 billion.

Chart 12: Compensation of the Chief Executive, by Company Sales

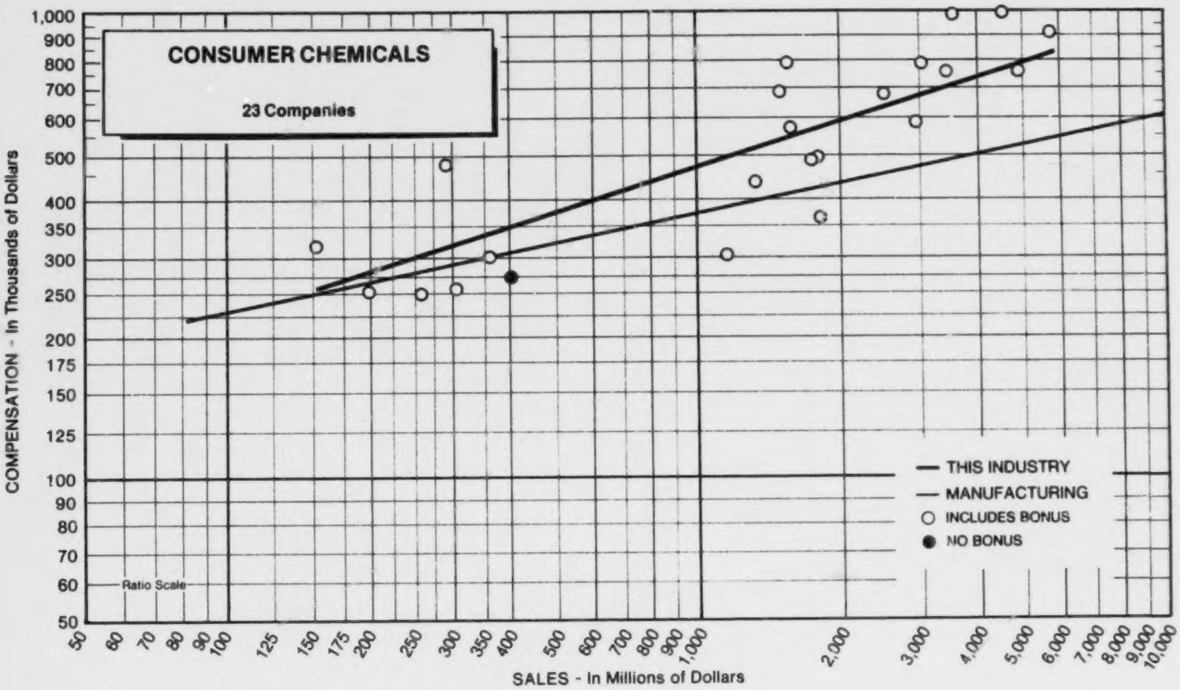
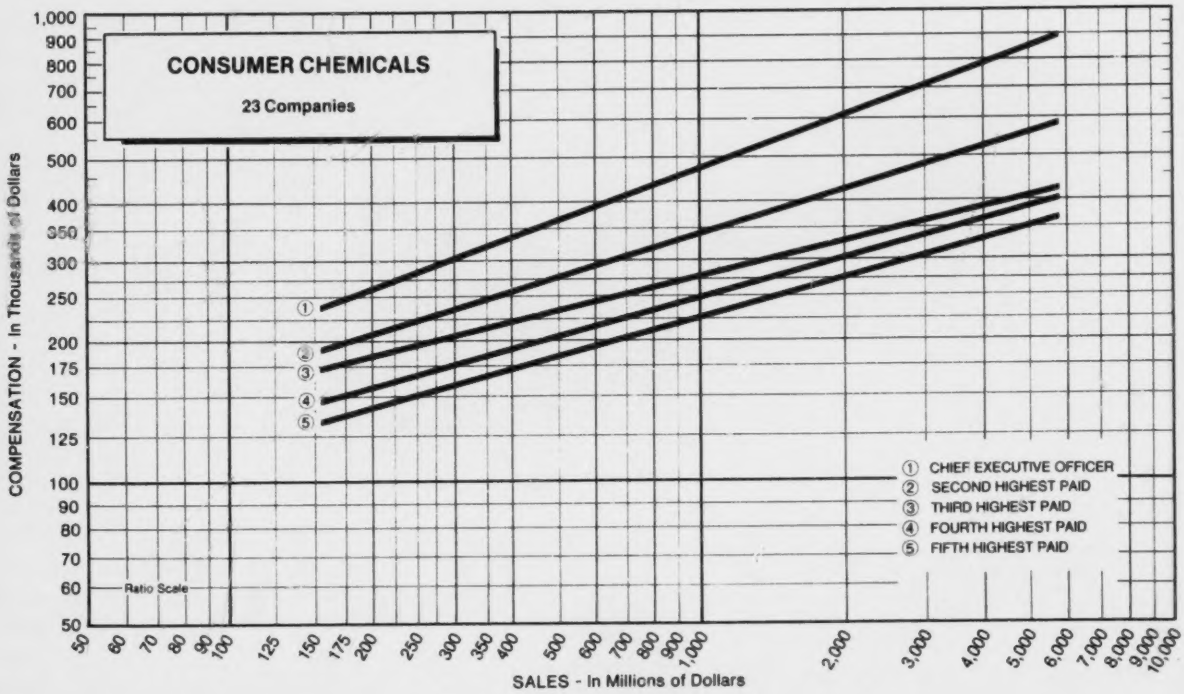


Chart 13: Compensation of the Five Highest Paid Executives, by Company Sales



1982 Sales	*Number of Companies*
$2 billion and over	8
1 - 1,999 billion	8
100 - 999 million	7
Total	23

Median Sales:
$1.6 billion
Middle 50 percent:
$349 million to
$3.1 billion

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 23 companies is plotted in Chart 12. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$495,000	$302,000 to $762,000
Second	368,000	242,000 to 558,000
Third	302,000	209,000 to 400,000
Fourth	265,000	196,000 to 376,000
Fifth	249,000	168,000 to 334,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	73%	64% to 83%
Third highest	58	52 to 65
Fourth highest	51	47 to 57
Fifth highest	46	43 to 52

As the lines on Chart 13 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.5881 + 0.3583 \log X$	73%
Second	$\log Y = 1.5915 + 0.3127 \log X$	63
Third	$\log Y = 1.6904 + 0.2510 \log X$	58
Fourth	$\log Y = 1.5167 + 0.2922 \log X$	64
Fifth	$\log Y = 1.4988 + 0.2839 \log X$	65

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.6346 + 0.2850 \log X$	72%
Second	$\log Y = 1.6252 + 0.2454 \log X$	63
Third	$\log Y = 1.6884 + 0.1956 \log X$	56
Fourth	$\log Y = 1.5653 + 0.2237 \log X$	64
Fifth	$\log Y = 1.5982 + 0.2009 \log X$	61

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Twenty-two (96 percent) of the 23 companies have an **annual executive bonus plan**; that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Twenty-one (96 percent) of these companies made a bonus award for 1982 performance; all of them also paid a bonus for 1981. The one company that did not pay a bonus for 1982 paid no bonus for 1981 performance, either.

Nine (39 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Ten (43 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Nineteen (83 percent) of the companies have a **stock option plan.** Seventeen of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; one grants only ISO's, and one only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 12 (67 percent) of the 18 companies that grant ISO's, and by 13 (72 percent) of the 18 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by eight (44 percent) of the 18 companies that grant ISO's. Most (6) limit SAR's to a small group of top management (essentially, "insiders"); the other two plans grant SAR's to all ISO recipients.

SAR's are provided by 12 (67 percent) of the 18 companies that grant nonqualified options. Most (8) limit SAR's to a small group of top management; the other four plans grant SAR's to all nonqualified option recipients.

Stone, Clay, Glass and Concrete Products

This industry includes manufacturers of flat glass and other glass products, cement, structural clay products, pottery, concrete and gypsum products, cut stone products, abrasive and asbestos products, etc., from materials taken principally from the earth in the form of stone, clay and sand. (SIC: 32)

The Companies

Executive compensation data for this industry were obtained from 25 companies, classified below according to 1982 sales volume. The smallest company had sales of $109 million; the largest, $6.6 billion.

1982 Sales	*Number of Companies*
$2 billion and over	5
1 - 1,999 billion	5
500 - 999 million	5
300 - 499 million	6
100 - 299 million	4
Total	25

Median Sales:
$889 million
Middle 50 percent:
$352 million to
$1.7 billion

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 25 companies is plotted in Chart 14. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$324,000	$250,000 to $443,000
Second	215,000	172,000 to 325,000
Third	185,000	146,000 to 263,000
Fourth	156,000	130,000 to 214,000
Fifth	147,000	105,000 to 188,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	72%	61% to 80%
Third highest	56	49 to 66
Fourth highest	47	43 to 58
Fifth highest	46	39 to 49

As the lines on Chart 15 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.6288 + 0.3005 \log X$	58%
Second	$\log Y = 1.5120 + 0.2874 \log X$	53
Third	$\log Y = 1.4603 + 0.2734 \log X$	51
Fourth	$\log Y = 1.3195 + 0.3000 \log X$	71
Fifth	$\log Y = 1.2626 + 0.3033 \log X$	73

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.5433 + 0.3054 \log X$	64%
Second	$\log Y = 1.4034 + 0.3002 \log X$	58
Third	$\log Y = 1.3693 + 0.2787 \log X$	61
Fourth	$\log Y = 1.2423 + 0.3046 \log X$	75
Fifth	$\log Y = 1.1832 + 0.3100 \log X$	78

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Chart 14: Compensation of the Chief Executive, by Company Sales

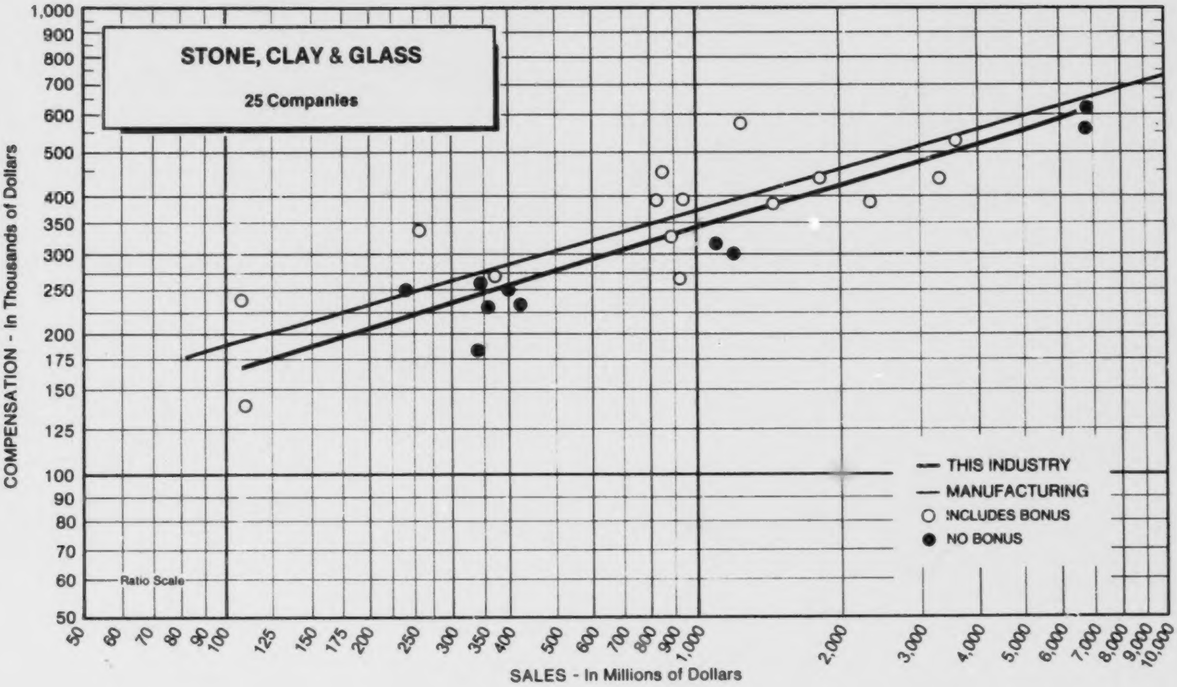
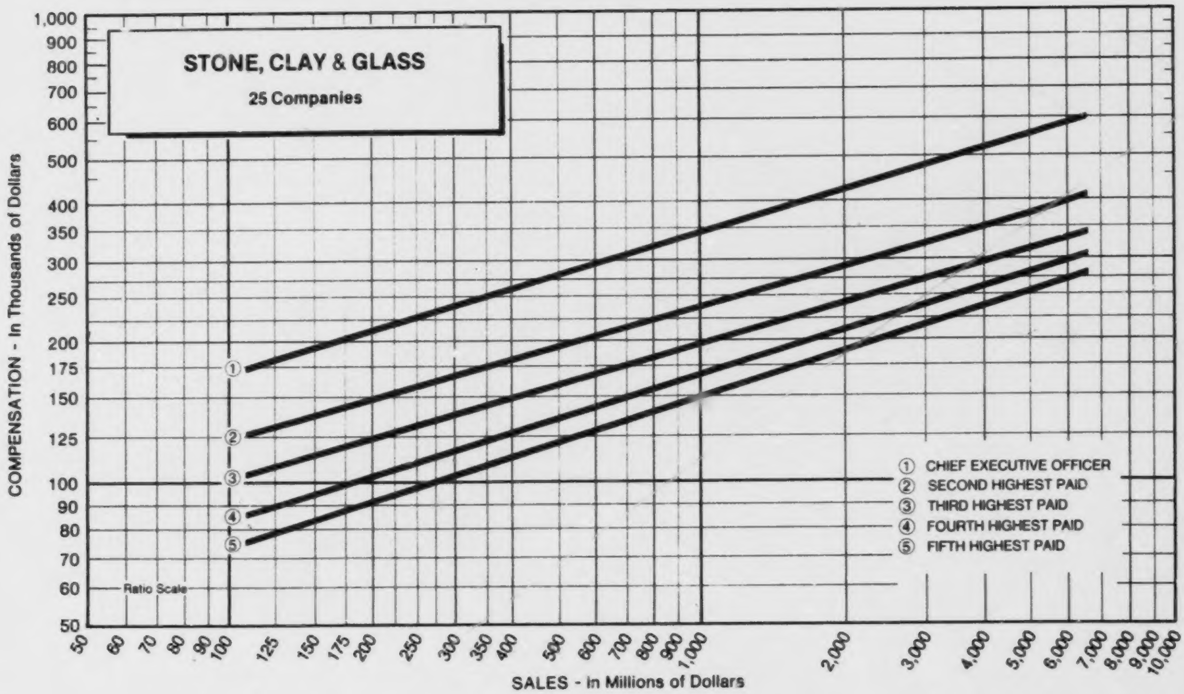


Chart 15: Compensation of the Five Highest Paid Executives, by Company Sales



Executive Incentive Plans

Twenty-two (88 percent) of the 25 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Sixteen (73 percent) of these companies made a bonus award for 1982 performance; most (15) also paid a bonus for 1981. Among the six companies that did not pay a bonus for 1982, four paid a bonus for 1981 performance, but the other two paid no bonus in either year.

Fourteen (56 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Four (16 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Twenty-one (84 percent) of the companies have a **stock option plan.** Fourteen of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; three grant only ISO's, and four only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 12 (71 percent) of the 17 companies that grant ISO's, and by ten (56 percent) of the 18 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by eight (47 percent) of the 17 companies that grant ISO's. Most (6) limit SAR's to a small group of top management (essentially, "insiders"); the other two plans grant SAR's to all ISO recipients.

SAR's are provided by 12 (67 percent) of the 18 companies that grant nonqualified options. Most (9) limit SAR's to a small group of top management; the other three plans grant SAR's to all nonqualified option recipients.

Primary Metals

This industry includes companies engaged in the smelting of ferrous and nonferrous metals; in rolling, drawing and alloying these metals; in the manufacture of castings, forgings and other basic metal products; and in the manufacture of nails, spikes and insulated wire and cable. (SIC: 33)

The Companies

Executive compensation data for this industry were obtained from 30 companies, classified below according to 1982 sales volume. The smallest company had sales of $115 million; the largest, $18.9 billion.

1982 Sales	*Number of Companies*
$5 billion and over	3
1 - 4,999 billion	8
500 - 999 million	5
300 - 499 million	7
100 - 299 million	7
Total	30

Median Sales:
$574 million
Middle 50 percent:
$282 million to
$2.9 billion

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 30 companies is plotted in Chart 16. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

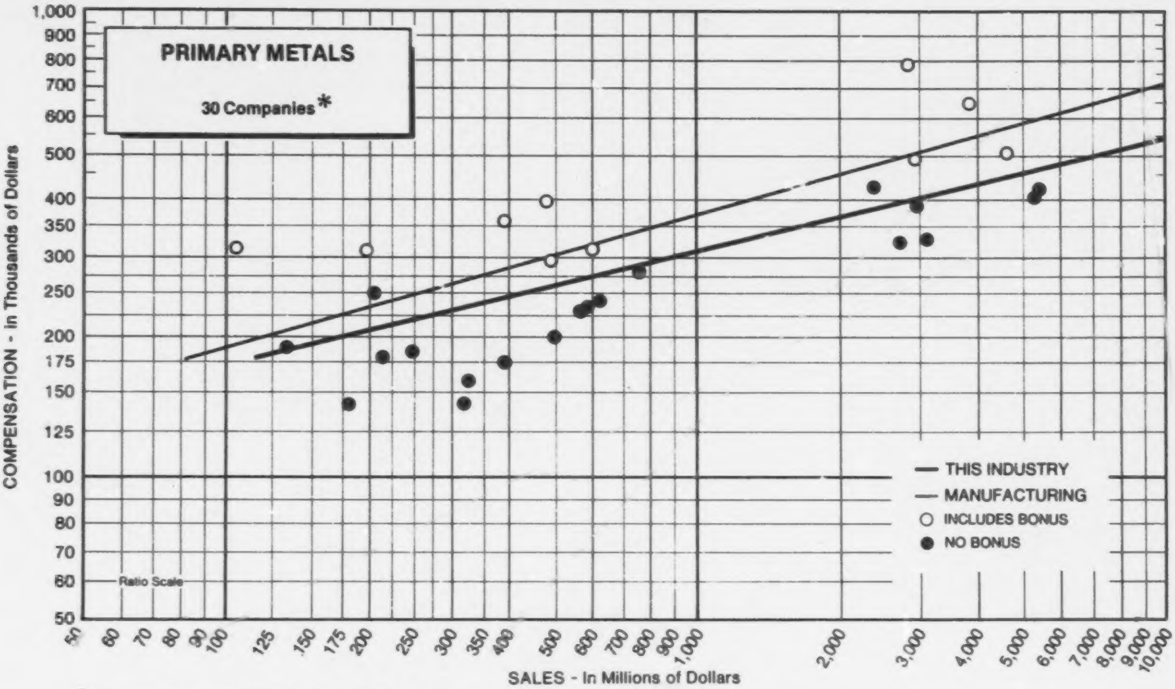
	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$313,000	$197,000 to $414,000
Second	222,000	137,000 to 300,000
Third	164,000	106,000 to 245,000
Fourth	150,000	95,000 to 230,000
Fifth	123,000	82,000 to 207,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	72%	57% to 83%
Third highest	56	50 to 62
Fourth highest	48	42 to 56
Fifth highest	43	37 to 50

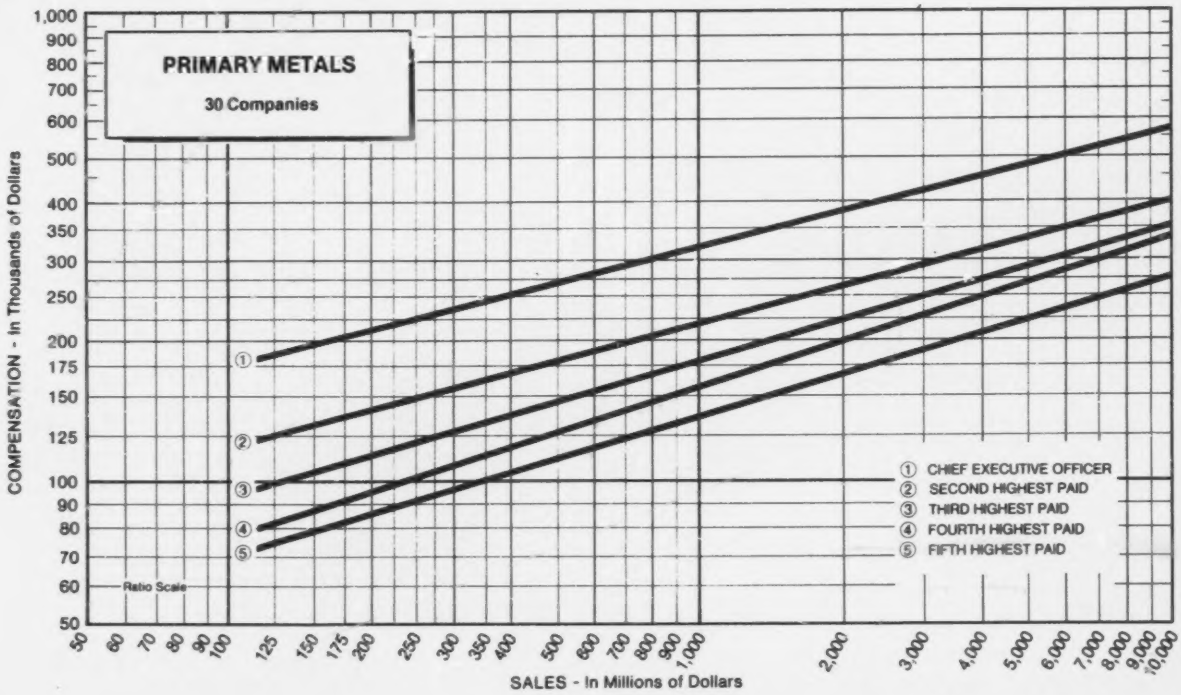
As the lines on Chart 17 illustrate, the total compensation of each of the five groups of executives is related posi-

Chart 16: Compensation of the Chief Executive, by Company Sales



* One company with sales over $10 billion not plotted

Chart 17: Compensation of the Five Highest Paid Executives, by Company Sales



tively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7441 + 0.2506 \log X$	57%
Second...........	$\log Y = 1.4958 + 0.2799 \log X$	57
Third............	$\log Y = 1.4008 + 0.2822 \log X$	62
Fourth...........	$\log Y = 1.2970 + 0.2983 \log X$	65
Fifth	$\log Y = 1.2750 + 0.2865 \log X$	71

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.5294 + 0.3013 \log X$	82%
Second...........	$\log Y = 1.2899 + 0.3311 \log X$	83
Third............	$\log Y = 1.1437 + 0.3427 \log X$	83
Fourth...........	$\log Y = 1.1187 + 0.3384 \log X$	82
Fifth	$\log Y = 1.1133 + 0.3248 \log X$	82

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Twenty-nine (97 percent) of the 30 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Fourteen (48 percent) of these companies made a bonus award for 1982 performance; all of them also paid a bonus for 1981. Among the 15 companies that did not pay a bonus for 1982, 12 paid a bonus for 1981 performance, but the other three paid no bonus in either year.

Five (17 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Five (17 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Twenty-four (80 percent) of the companies have a **stock option plan.** Twelve of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; three grant only ISO's, and nine only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by six (40 percent) of the 15 companies that grant ISO's, and by ten (48 percent)of the 21 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by five of the 15 companies that grant ISO's. Two limit SAR's to a small group of top management (essentially, "insiders"); the other three plans grant SAR's to all ISO recipients.

SAR's are provided by 14 (67 percent) of the 21 companies that grant nonqualified options. Seven limit SAR's to a small group of top management; the other seven plans grant SAR's to all nonqualified option recipients.

Fabricated Metal Products (except Machinery and Transportation Equipment)

This industry includes manufacturers of ferrous and nonferrous metals products such as metal cans, tinware, hand tools, cutlery, hardware, fabricated structural metal products, metal stampings, and a variety of metal and wire products. Excluded are machinery, transportation equipment, professional, scientific and controlling instruments, jewelry and silverware. (SIC: 34)

The Companies

Executive compensation data for this industry were obtained from 23 companies, classified below according to 1982 sales volume. The smallest company had sales of $158 million; the largest, $4.9 billion.

1982 Sales	*Number of Companies*
$1 billion and over......	3
500 - 999 million	4
300 - 499 million	10
100 - 299 million	6
Total	23

Median Sales:
$436 million
Middle 50 percent:
$230 million to
$968 million

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives,

Chart 18: Compensation of the Chief Executive, by Company Sales

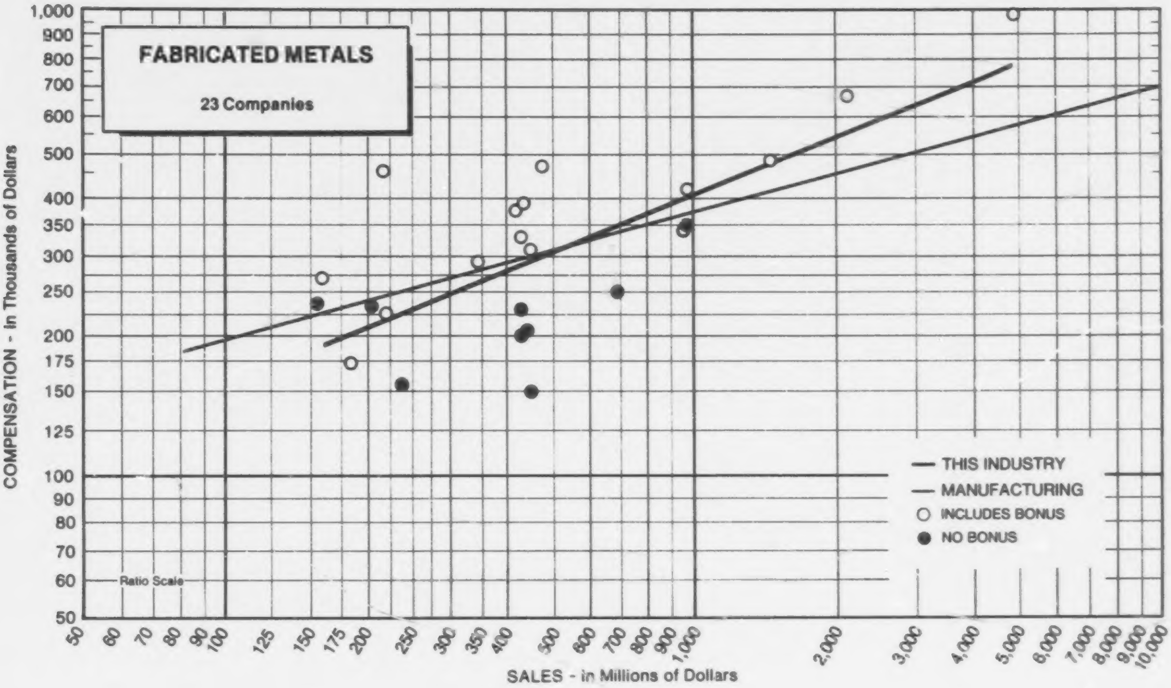
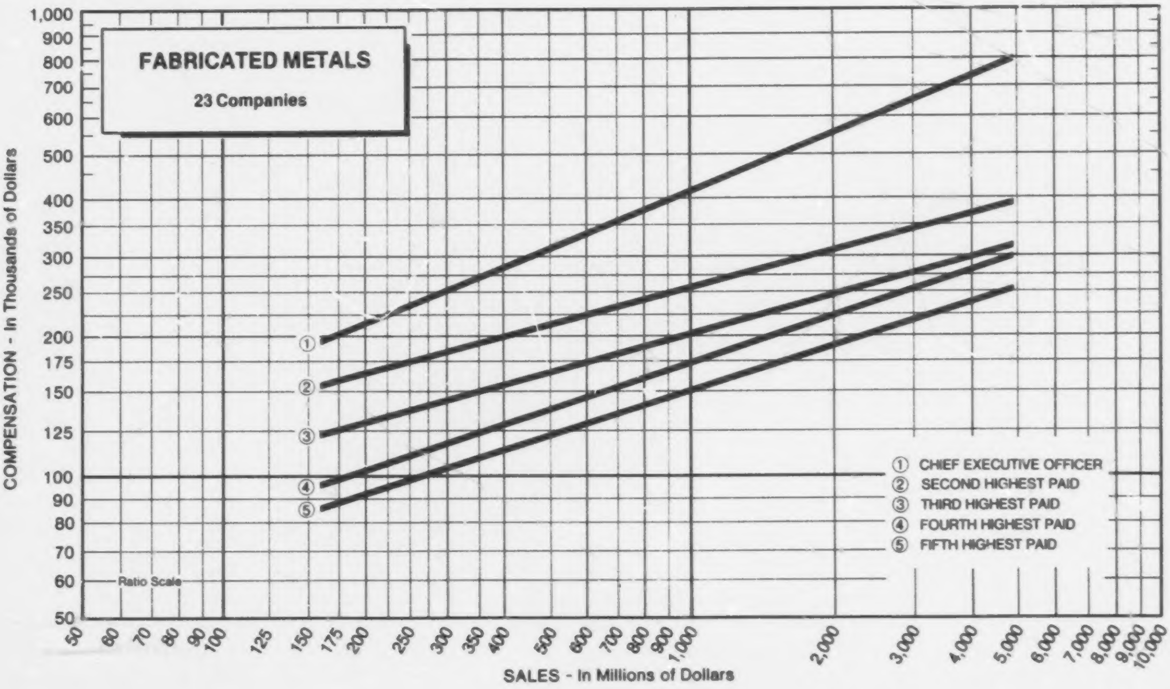


Chart 19: Compensation of the Five Highest Paid Executives, by Company Sales



without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 23 companies is plotted in Chart 18. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$310,000	$221,000 to $435,000
Second	216,000	149,000 to 267,000
Third	172,000	130,000 to 218,000
Fourth	132,000	105,000 to 176,000
Fifth	125,000	87,000 to 156,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	71%	64% to 79%
Third highest..........	54	46 to 66
Fourth highest.........	46	37 to 56
Fifth highest	41	33 to 48

As the lines on Chart 19 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.4041 + 0.4030 \log X$	52%
Second...........	$\log Y = 1.6122 + 0.2623 \log X$	37
Third............	$\log Y = 1.4841 + 0.2736 \log X$	32
Fourth...........	$\log Y = 1.2565 + 0.3271 \log X$	50
Fifth	$\log Y = 1.2621 + 0.3039 \log X$	47

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.4874 + 0.3365 \log X$	70%
Second...........	$\log Y = 1.6885 + 0.1979 \log X$	36
Third............	$\log Y = 1.4794 + 0.2418 \log X$	47
Fourth...........	$\log Y = 1.3022 + 0.2793 \log X$	62
Fifth	$\log Y = 1.3124 + 0.2624 \log X$	51

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

All of the 23 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Eighteen (78 percent) of these companies made a bonus award for 1982 performance; all of them also paid a bonus for 1981. The five companies that did not pay a bonus for 1982, did pay a bonus for 1981 performance.

Ten (43 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Eight (35 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Nineteen (83 percent) of the companies have a **stock option plan.** Thirteen of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; two grant only ISO's, and four only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 11 (73 percent) of the 15 companies that grant ISO's, and by nine (53 percent) of the 17 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by four (27 percent) of the 15 companies that grant ISO's. Three limit SAR's to a small group of top management (essentially, "insiders"); the other plan grants SAR's to all ISO recipients.

SAR's are provided by nine (53 percent) of the 17 companies that grant nonqualified options. Five limit SAR's to a small group of top management; the other four plans grant SAR's to all nonqualified option recipients.

Machinery (except Electrical)

This industry includes manufacturers of machinery and equipment, other than electrical equipment and transportation equipment. Machines powered by built-in or detachable motors are included, except for electrical household appliances. Portable tools, both electrical and pneumatic-powered, are included, but not hand tools. Includes office machines and computers. (SIC: 35)

The Companies

Executive compensation data for this industry were obtained from 66 companies, classified below according to 1982 sales volume. The smallest company had sales of $122 million; the largest, $34 billion.

1982 Sales	*Number of Companies*
$5 billion and over	3
2 - 4,999 billion	9
1 - 1,999 billion	12
500 - 999 million	9
300 - 499 million	13
200 - 299 million	8
100 - 199 million	12
Total	66

Median Sales:
$488 million

Middle 50 percent:
$228 million to
$1.6 billion

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 66 companies is plotted in Chart 20. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$315,000	$228,000 to $453,000
Second	235,000	154,000 to 312,000
Third	170,000	128,000 to 238,000
Fourth	160,000	112,000 to 210,000
Fifth	133,000	99,000 to 190,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	71%	61% to 84%
Third highest	55	47 to 63
Fourth highest	47	42 to 58
Fifth highest	44	38 to 52

As the lines on Chart 21 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.6557 + 0.3025 \log X$	60%
Second	$\log Y = 1.4631 + 0.3166 \log X$	62
Third	$\log Y = 1.3657 + 0.3136 \log X$	73
Fourth	$\log Y = 1.3192 + 0.3120 \log X$	76
Fifth	$\log Y = 1.2604 + 0.3167 \log X$	76

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

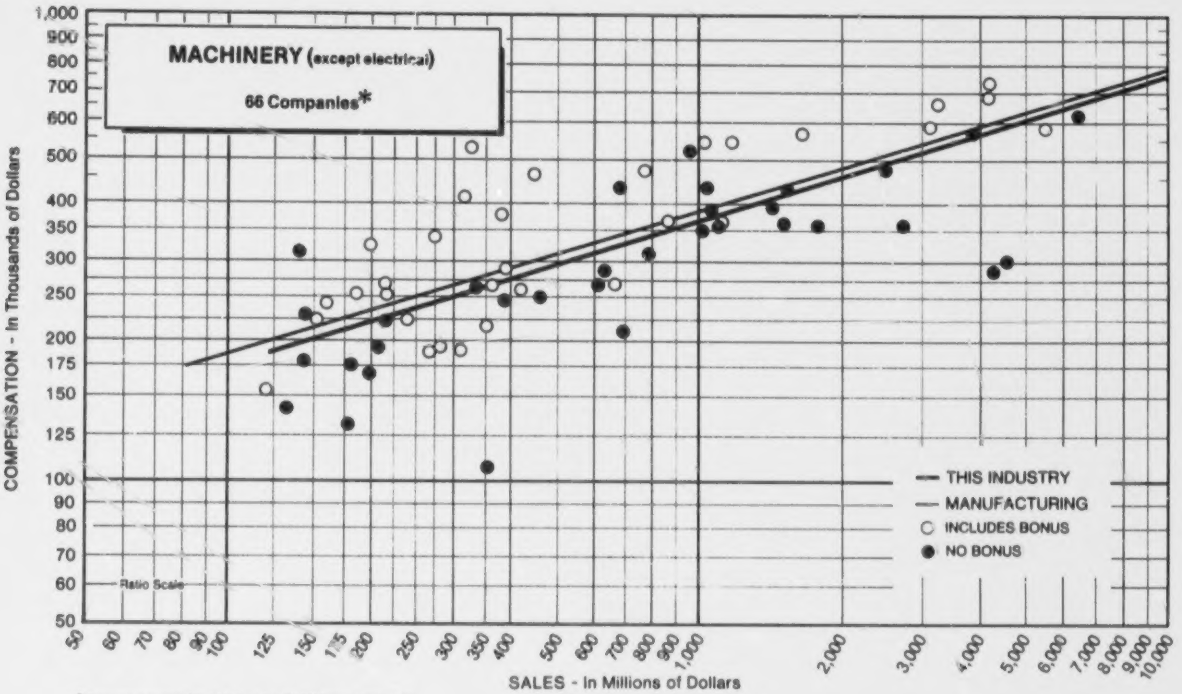
Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7596 + 0.2369 \log X$	53%
Second	$\log Y = 1.5811 + 0.2473 \log X$	54
Third	$\log Y = 1.4404 + 0.2569 \log X$	66
Fourth	$\log Y = 1.4403 + 0.2439 \log X$	62
Fifth	$\log Y = 1.3735 + 0.2533 \log X$	68

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

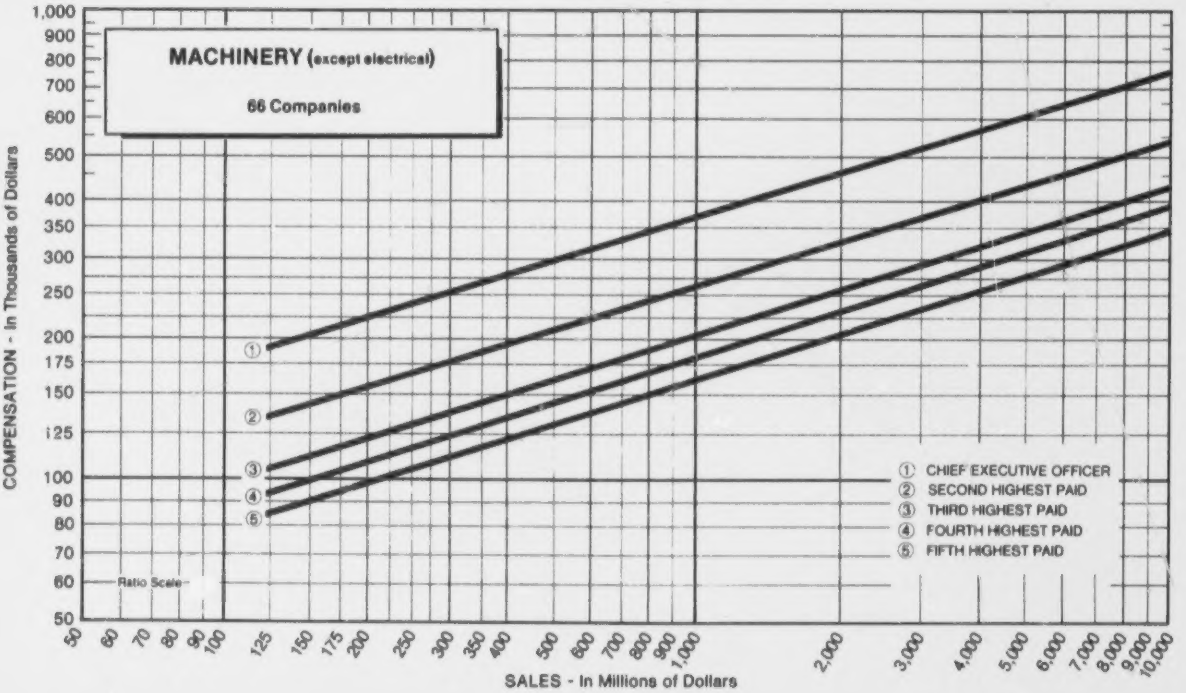
Sixty (91 percent) of the 66 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end

Chart 20: Compensation of the Chief Executive, by Company Sales



*One company with sales over $10 billion not plotted

Chart 21: Compensation of the Five Highest Paid Executives, by Company Sales



bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Forty-one (68 percent) of these companies made a bonus award for 1982 performance; most (39) also paid a bonus for 1981. Among the 19 companies that did not pay a bonus for 1982, 13 paid a bonus for 1981 performance, but the other six paid no bonus in either year.

Twenty (30 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Seventeen (26 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Fifty-three (80 percent) of the companies have a **stock option plan.** Thirty-seven of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; six grant only ISO's, and ten only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 25 (58 percent) of the 43 companies that grant ISO's, and by 28 (60 percent) of the 47 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by 16 (37 percent) of the 43 companies that grant ISO's. Most (10) limit SAR's to a small group of top management (essentially, "insiders"); the other six plans grant SAR's to all ISO recipients.

SAR's are provided by 21 (45 percent) of the 47 companies that grant nonqualified options. Most (13) limit SAR's to a small group of top management; the other eight plans grant SAR's to all nonqualified option recipients.

Electrical and Electronic Machinery, Equipment and Supplies

This industry includes manufacturers of machinery, apparatus and supplies for the generation, storage, transportation, transformation and utilization of electrical energy. Includes household appliances, but not industrial machinery powered by built-in or detachable electric motors. Includes electronic components. (SIC: 36)

The Companies

Executive compensation data for this industry were obtained from 43 companies, classified below according to 1982 sales volume. The smallest company had sales of $98 million; the largest, $26.5 billion.

1982 Sales	*Number of Companies*
$5 billion and over	4
2 - 4,999 billion	8
1 - 1,999 billion	5
300 - 999 million	7
200 - 299 million	6
100 - 199 million	13
Total	43

Median Sales:
$441 million

Middle 50 percent:
$189 million to
$2.5 billion

1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

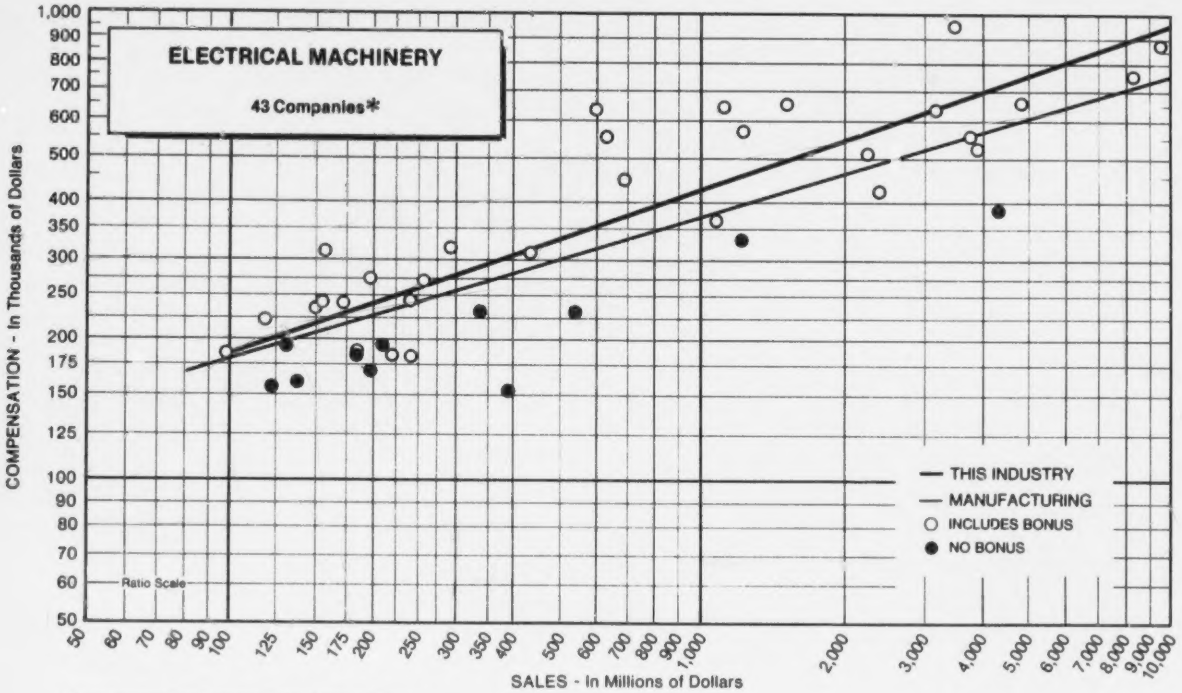
The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 43 companies is plotted in Chart 22. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$320,000	$194,000 to $626,000
Second	208,000	147,000 to 416,000
Third	165,000	117,000 to 295,000
Fourth	132,000	114,000 to 221,000
Fifth	115,000	95,000 to 203,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

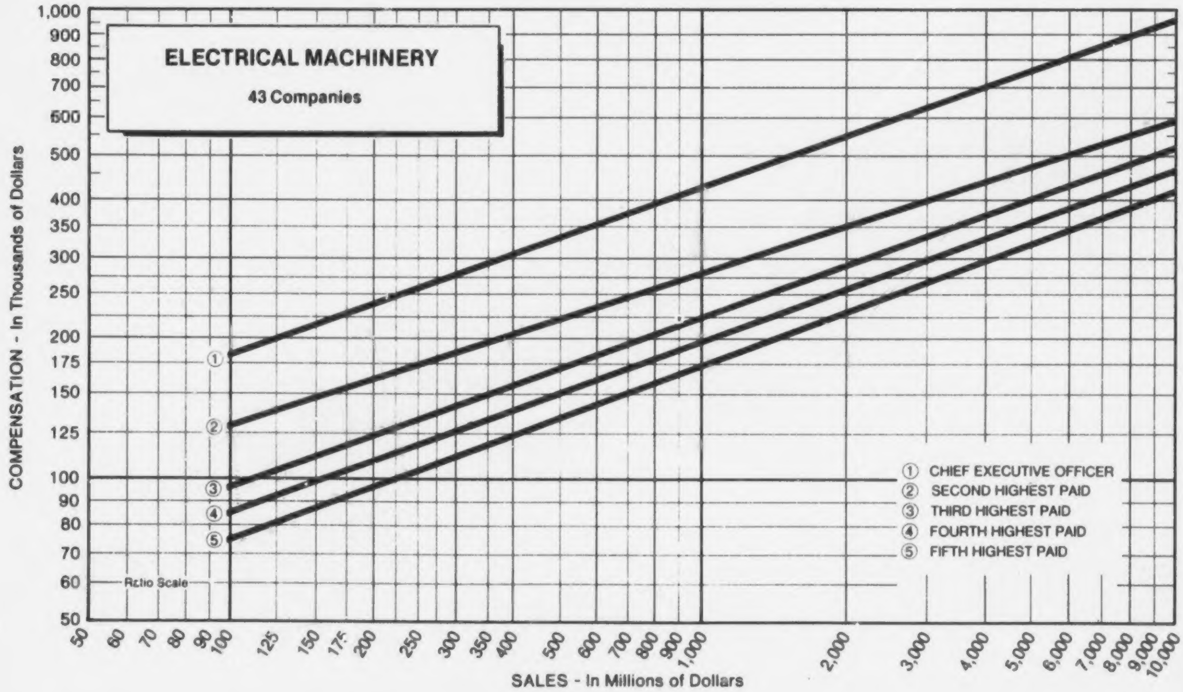
	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	69%	58% to 75%
Third highest	53	45 to 62
Fourth highest	50	39 to 56
Fifth highest	43	35 to 52

Chart 22: Compensation of the Chief Executive, by Company Sales



*Two companies with sales over $10 billion not plotted

Chart 23: Compensation of the Five Highest Paid Executives, by Company Sales



As the lines on Chart 23 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	log Y = 1.5658 + 0.3520 log X	69%
Second...........	log Y = 1.4045 + 0.3467 log X	76
Third............	log Y = 1.2504 + 0.3644 log X	85
Fourth...........	log Y = 1.2289 + 0.3541 log X	84
Fifth	log Y = 1.1504 + 0.3628 log X	85

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	log Y = 1.7318 + 0.2402 log X	73%
Second...........	log Y = 1.5549 + 0.2444 log X	66
Third............	log Y = 1.4044 + 0.2616 log X	79
Fourth...........	log Y = 1.3697 + 0.2607 log X	81
Fifth	log Y = 1.3000 + 0.2693 log X	84

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

Forty-two (98 percent) of the 43 companies have an **annual executive bonus plan;** that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Thirty-two (76 percent) of these companies made a bonus award for 1982 performance; all but one also paid a bonus for 1981. Among the nine companies that did not pay a bonus for 1982, seven paid a bonus for 1981 performance, but the other two paid no bonus in either year.

Fourteen (33 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Ten (23 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Forty-one (95 percent) of the companies have a **stock option plan.** Twenty-five of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; ten grant only ISO's, and six only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 26 (74 percent) of the 35 companies that grant ISO's, and by 24 (77 percent) of the 31 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by ten (29 percent) of the 35 companies that grant ISO's. Most (7) limit SAR's to a small group of top management (essentially, "insiders"); the other two plans grant SAR's to all ISO recipients.

SAR's are provided by 13 (42 percent) of the 31 companies that grant nonqualified options. Most (12) limit SAR's to a small group of top management; the other plan grants SAR's to all nonqualified option recipients.

Transportation Equipment

This industry includes manufacturers of equipment for transportation of passengers and cargo by land, water and air. (SIC: 37)

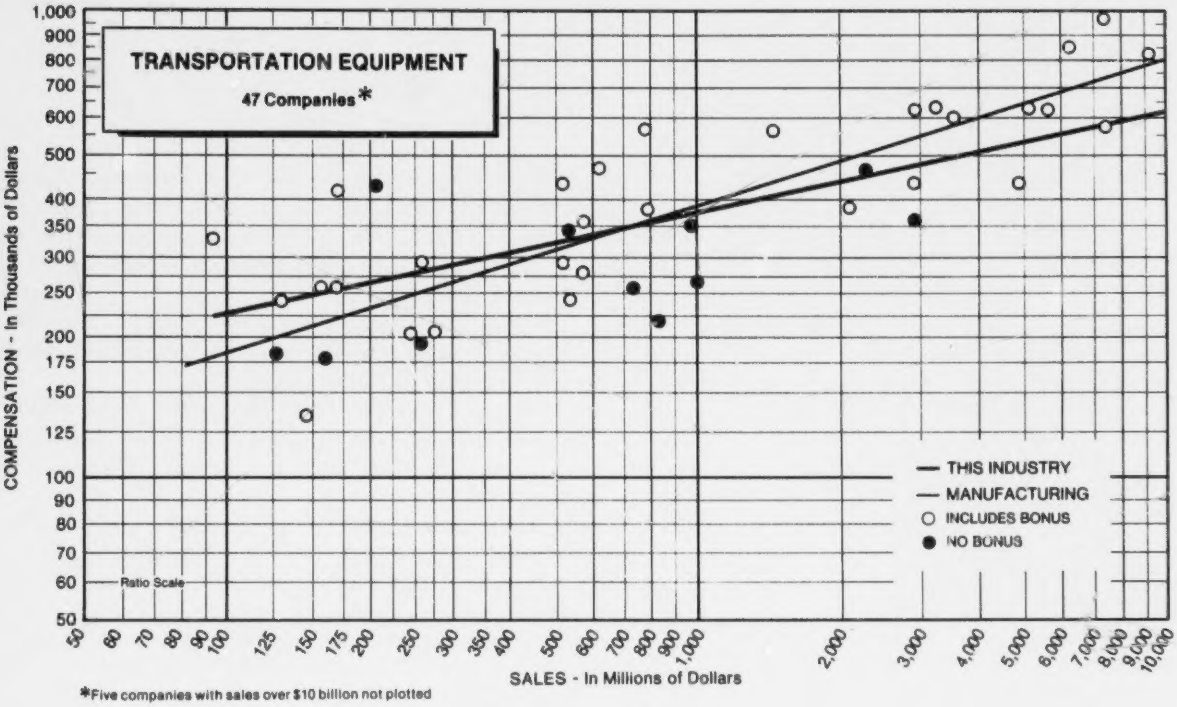
The Companies

Executive compensation data for this industry were obtained from 47 companies, classified below according to 1982 sales volume. The smallest company had sales of $94 million; the largest, $60 billion.

1982 Sales	*Number of Companies*
$5 billion and over......	12
1 - 4,999 billion	10
300 - 999 million	12
200 - 299 million	5
100 - 199 million	8
Total	47

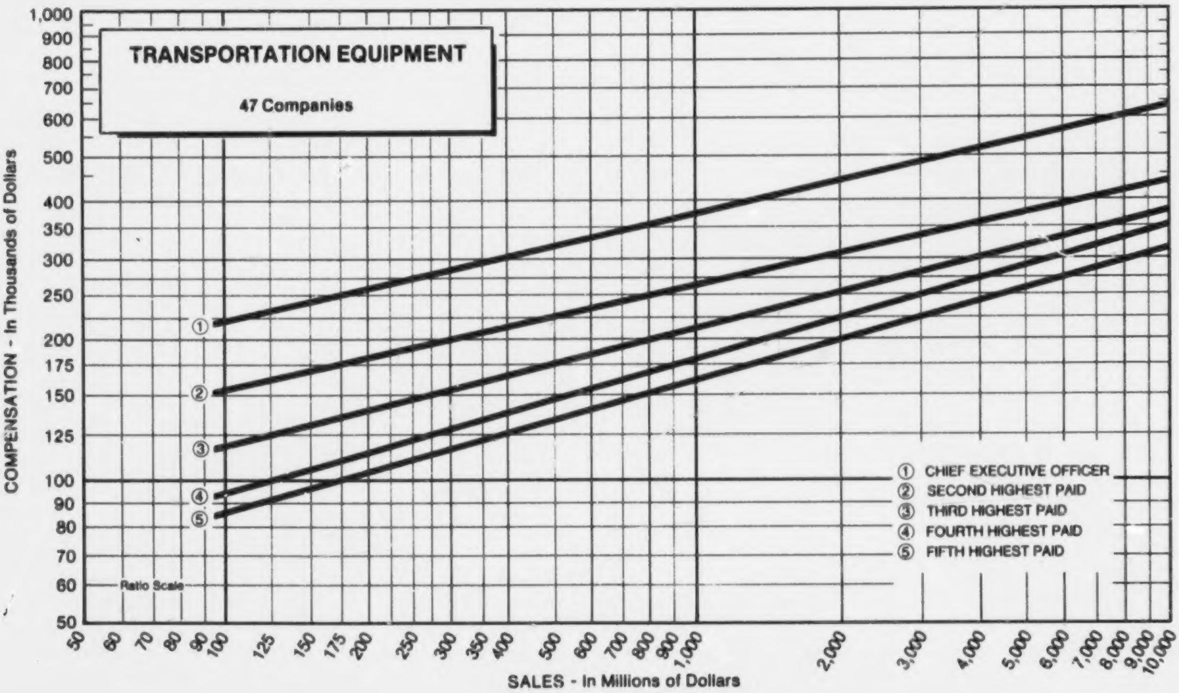
Median Sales:
$832 million
Middle 50 percent:
$262 million to
$5.2 billion

Chart 24: Compensation of the Chief Executive, by Company Sales



*Five companies with sales over $10 billion not plotted

Chart 25: Compensation of the Five Highest Paid Executives, by Company Sales



1982 Compensation

For each manufacturer in this industry, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation of each of the chief executive officers in this particular sample of 47 companies is plotted in Chart 24. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$388,000	$261,000 to $579,000
Second	270,000	180,000 to 400,000
Third	230,000	135,000 to 326,000
Fourth	185,000	117,000 to 304,000
Fifth	168,000	111,000 to 266,000

The ratio of the pay of each executive to that of the chief executive officer is shown below.

	Pay as Percentage of Chief Executive's Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Second highest	70%	62% to 82%
Third highest	55	49 to 65
Fourth highest	48	42 to 60
Fifth highest	44	36 to 50

As the lines on Chart 25 illustrate, the total compensation of each of the five groups of executives is related positively to company sales volume. The regression formula for each of these lines is shown below. Also shown is the "coefficient of determination" (r^2) which measures the percentage of the variation in compensation that is explained statistically by the variation in sales volume.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.9066 + 0.2210 \log X$	56%
Second	$\log Y = 1.7296 + 0.2288 \log X$	63
Third	$\log Y = 1.5791 + 0.2472 \log X$	64
Fourth	$\log Y = 1.4302 + 0.2743 \log X$	70
Fifth	$\log Y = 1.4008 + 0.2676 \log X$	66

In each case, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.

Base salary of the top-paid executives also is related to sales volume. The regression equation for each of the five executives is shown below, along with the "coefficient of determination."

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.8833 + 0.1932 \log X$	62%
Second	$\log Y = 1.6883 + 0.2058 \log X$	68
Third	$\log Y = 1.5506 + 0.2204 \log X$	68
Fourth	$\log Y = 1.3805 + 0.2570 \log X$	78
Fifth	$\log Y = 1.3696 + 0.2448 \log X$	72

Again, Y is salary stated in *thousands* of dollars and X is sales volume stated in *millions* of dollars.

Executive Incentive Plans

All of the 47 companies have an **annual executive bonus plan**; that is, a plan that pays a year-end bonus based on that year's performance. (For an analysis of 1982 bonus awards, see page 10.)

Thirty-seven (79 percent) of these companies made a bonus award for 1982 performance; most (34) also paid a bonus for 1981. Among the ten companies that did not pay a bonus for 1982, six paid a bonus for 1981 performance, but the other four paid no bonus in either year.

Ten (21 percent) of the companies have an executive incentive plan that is based on long-term corporate performance goals, usually called **performance share or performance unit plans.** (For a description of payouts during 1982, see page 12.)

Fifteen (32 percent) of the companies have a **restricted stock plan** under which grants of company stock are subject to forfeiture until earned out through continued employment.

Forty-one (87 percent) of the companies have a **stock option plan.** Thirty-one of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; five grant only ISO's, and five only nonqualified options. (For an analysis of the size of grants made during 1982, see page 13.)

Stock-for-stock exercise (stock swaps) are provided for by 25 (69 percent) of the 36 companies that grant ISO's, and by 20 (56 percent) of the 36 companies that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by 16 (44 percent) of the 36 companies that grant ISO's. Eight limit SAR's to a small group of top management (essentially, "insiders"); the other eight plans grant SAR's to all ISO recipients.

SAR's are provided by 17 (47 percent) of the 36 companies that grant nonqualified options. Most (10) limit SAR's to a small group of top management; the other seven plans grant SAR's to all nonqualified option recipients.

Chapter 4

Retail Trade

INFORMATION ABOUT THE 1982 compensation of their five highest paid executives was obtained from 92 retailers, 25 percent of approximately all retailers with sales of $50 million or more. These 92 retailers are classified below according to 1982 sales volume.

1982 Sales	Retailers Number	 Percent
$3 billion and over	15	16%
1 - 2,999 billion	15	16
500 - 999 million	12	13
300 - 499 million	16	18
200 - 299 million	12	13
50 - 199 million	22	24
Total	92	100%

Median sales volume is $445 million, with the middle half of retailers ranging between $220 million and $1.1 billion.

Compensation Changes

On the average, total compensation for 1982 (which includes bonus awards) was 7 percent greater than in 1981 for top executives in these retail firms. For example, in a sample of chief executive officers for whom both 1981 and 1982 total compensation was available, the median change was an increase of 7 percent with the middle half ranging between no change and an increase of 17 percent.

About the same proportion (58 percent) of these retailers made bonus awards for 1982 performance as for 1981, although the size of the awards, as a percentage of base salary, was off somewhat.

Base salaries for 1982 were up 8 percent over 1981, a sharp drop in the rate of salary increases. Salary increases for the chief executive officer position averaged about 13 percent during 1980 and 1981.[1]

Year	Number of Companies	Percentage Increase in Salary Median	 Middle 50 Percent Range
1982	58	8%	0% to 15%
1979 - 1981	47	26	15 to 34
1977 - 1979	48	20	9 to 40
1975 - 1977	60	18	3 to 32
1973 - 1975	56	13	2 to 25

1982 Total Compensation

For each retailer, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation paid to each of the chief executive officers in this particular sample of 92 retailers is shown in Chart 26.

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[1] The 1979-1981 changes are from Harland Fox, *Top Executive Compensation 1982 Edition*. The Conference Board, Report No. 827, 1982, p. 44. The 1977-1979 changes are from *Top Executive Compensation 1980 Edition*. The Conference Board, Report 793, 1980, p. 46. The 1975-1977 changes are from *Top Executive Compensation 1978 Edition*. The Conference Board, Report No. 753, 1978, p. 56. The 1973-1975 changes are from *Top Executive Compenstion 1976 Edition*. The Conference Board, Report No. 706, 1976, p. 51.

Chart 26: Compensation of the Chief Executive, by Company Sales

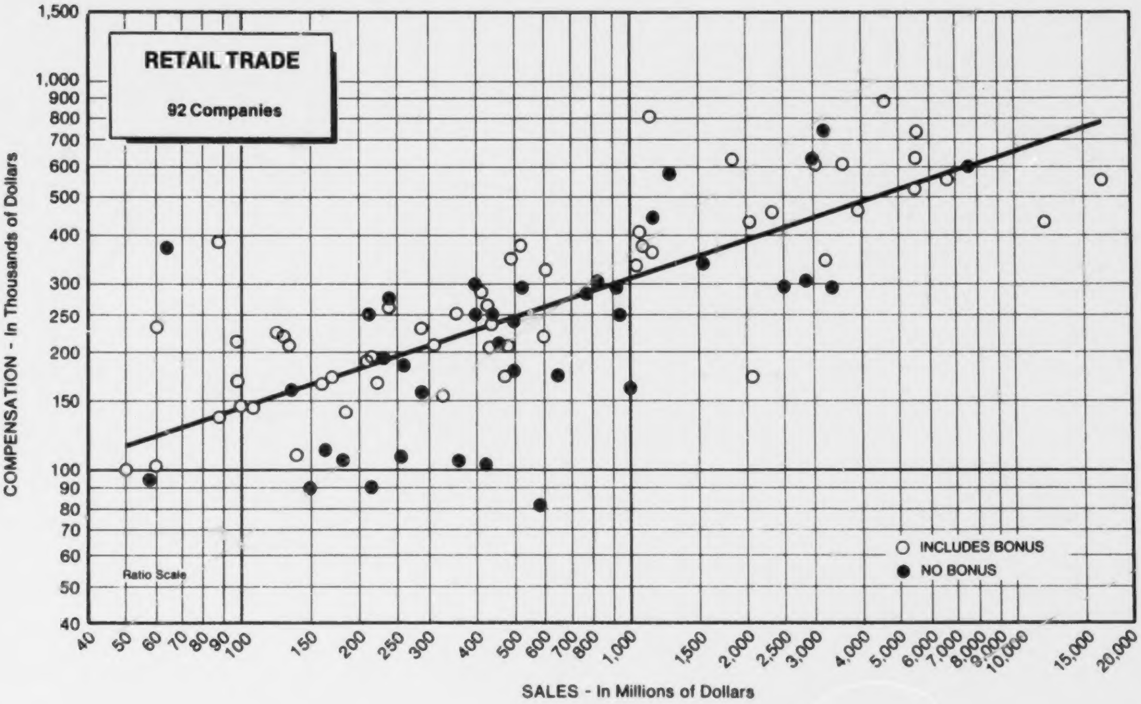
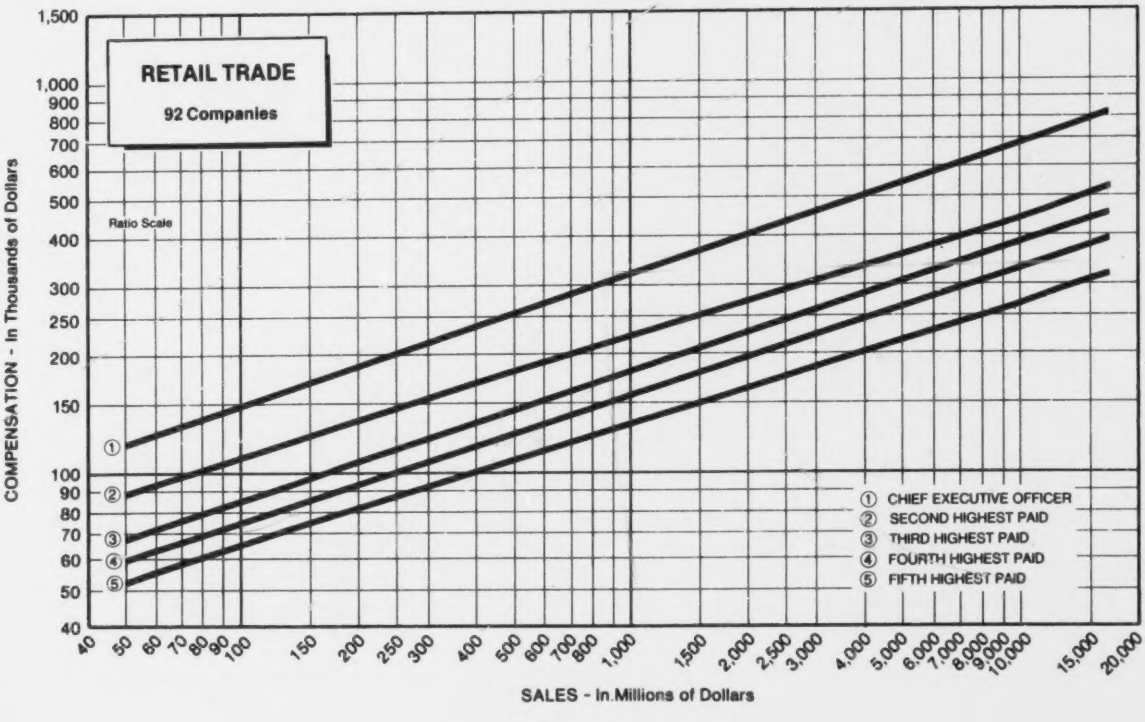


Chart 27: Compensation of the Five Highest Paid Executives, by Company Sales



The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

Compensation Rank	1982 Total Compensation Median	1982 Total Compensation Middle 50 Percent Range
Highest paid	$250,000	$167,000 to $375,000
Second	162,000	122,000 to 281,000
Third	135,000	92,000 to 237,000
Fourth	110,000	79,000 to 201,000
Fifth	100,000	70,000 to 156,000

As the lines in Chart 27 suggest, there is a positive relationship between the level of total compensation and sales volume for all five executives. The correlation coefficients for the five lines are, respectively: .72, .70, .74, .76, and .77.

The regression lines on the chart can be used to determine the average compensation of an executive at any level of sales, either by a direct reading from the chart or by using the regression formulas below. (In these formulas, Y is total compensation stated in *thousands* of dollars, and X is sales volume stated in *millions* of dollars.)

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.5346 + 0.3197 \log X$	52%
Second	$\log Y = 1.4467 + 0.2998 \log X$	49
Third	$\log Y = 1.2788 + 0.3237 \log X$	55
Fourth	$\log Y = 1.2012 + 0.3299 \log X$	58
Fifth	$\log Y = 1.1438 + 0.3313 \log X$	60

Although total compensation and sales are highly related, company size is not the sole determinant of compensation level. As the "coefficients of determination" (r^2) above indicate, the variation in sales statistically explains 49 to 60 percent of the variation in total compensation of the five top-paid executives. (This coefficient is the square of the correlation coefficient.)

The ratio of the total compensation of each executive to that of the chief executive officer is shown below.

Compensation Rank	Total Compensation as a Percentage of Chief Executive's Total Compensation Median	Total Compensation as a Percentage of Chief Executive's Total Compensation Middle 50 Percent Range
Second highest	78%	60% to 85%
Third highest	62	46 to 70
Fourth highest	53	40 to 63
Fifth highest	44	34 to 58

1982 Salary

There is also a positive relationship between base salary and sales volume. The regression equations for the five top-paid executives are shown below. (Y is salary stated in *thousands* of dollars; X is sales volume stated in *millions* of dollars.)

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.4987 + 0.3005 \log X$	55%
Second	$\log Y = 1.3796 + 0.2945 \log X$	50
Third	$\log Y = 1.2574 + 0.3025 \log X$	52
Fourth	$\log Y = 1.1477 + 0.3216 \log X$	57
Fifth	$\log Y = 1.1554 + 0.3008 \log X$	53

As the coefficients of determination (r^2) above indicate, the variation in sales statistically explains 50 to 57 percent of the variation in base salary.

The ratio of the salary of each executive to the salary of the chief executive officer is shown below:

Compensation Rank	Salary as a Percentage of Chief Executive's Salary Median	Salary as a Percentage of Chief Executive's Salary Middle 50 Percent Range
Second highest	78%	60% to 85%
Third highest	60	48 to 71
Fourth highest	53	40 to 65
Fifth highest	45	36 to 59

These ratios are practically the same as the total compensation ratios.

1982 Bonus Awards

Sixty-six (72 percent) of the 92 retailers have an "annual" executive bonus plan; that is, a plan that pays a year-end bonus based on that year's corporate performance. These plans have become more common among retailers over the past decade; in 1972 only half of a comparable group of retailers had an annual incentive plan.[2] There is no particular relationship between the prevalence of these plans and the size of the company.

Eighty percent (53) of the 66 retailers with a bonus plan made an award for 1972 performance; 80 percent also paid a bonus for 1981. Among the 53 companies that paid a 1982 bonus, most (46) also paid an award for 1981, but seven did not. Among the 13 companies that paid no bonus for 1982, seven paid a 1981 bonus and six paid no bonus in either year.

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[2] *Top Executive Compensation 1972 Edition.* (out of print). The Conference Board, Report No. 573, 1972, p. 53.

Table 5: 1982 Bonus Awards and 1981 Median Bonus

1982 Bonus Award (Percent of Salary)	Chief Executives		Second Highest Paid		Third Highest Paid		Fourth Highest Paid		Fifth Highest Paid	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
100% or more	4	8%	3	6%	5	9%	4	8%	3	6%
75 - 99	6	11	3	6	1	2	1	2	1	2
50 - 74	8	15	11	21	6	11	8	15	5	9
40 - 49	11	21	5	9	7	13	6	11	8	15
30 - 39	2	4	9	17	11	20	10	19	12	22
20 - 29	8	15	8	15	9	18	8	15	7	13
10 - 19	8	15	8	15	11	20	8	15	12	22
Less than 10%	6	11	6	11	4	7	8	15	6	11
Total	53	100%	53	100%	54	100%	53	100%	54	100%
Median Bonus	41%		32%		31%		31%		30%	
Middle 50% Range	19 - 59%		19 - 50%		19 - 48%		15 - 48%		15 - 41%	
Median Salary	$190,000		$140,000		$99,000		$93,000		$83,000	
1981 Median Bonus	40%		40%		36%		36%		33%	

The median award for 1982 performance for 267 executives is 32 percent of base salary, with the middle half ranging from 18 to 50 percent of salary. As Table 5 indicates, the median award for chief executive officers (42 percent of salary) is considerably higher than that of the other four executives (30 to 32 percent of salary). Compared with bonus awards for 1981, the 1982 medians are 3 to 8 percentage points lower, except for the chief executive.[3]

For each of the five executives the bonus award as a percentage of salary increases with company size (Table 6).[4] Again, the 1982 medians at each size level are lower than in 1981.[5]

Long-term Incentive Plans

Twenty-three (25 percent) of the 92 retailers have a **restricted stock plan** under which contingent grants of company stock are made, subject to restrictions and forfeitures, until earned out by continued employment over a specified period of time. This is about the same proportion of retailers that had a plan three years ago; 19 percent (17) of 90 retailers reported a plan in 1980.[6]

Restricted stock plans are more common as company size increases. For example, 40 percent of the 15 retailers with sales of $3 billion or more have a plan compared with 26 percent of the 43 companies with sales in the $300 million to $3 billion range, and 18 percent of the 34 retailers with sales in the $50 million to $300 million range.

Table 6: 1982 and 1981 Bonus Awards (as Percent of Salary), by Company Size

Executive	Sales Volume		
	$180 Million	$425 Million	$1.4 Billion
Chief Executive			
1982 Bonus (%)	40%	43%	46%
Salary	$146,000	$190,000	$273,000
1981 Bonus (%)	46%	48%	53%
Second Highest Paid			
1982 Bonus (%)	39%	39%	40%
Salary	$108,000	$140,000	$199,000
1981 Bonus (%)	43%	45%	48%
Third Highest Paid			
1982 Bonus (%)	33%	37%	41%
Salary	$85,000	$109,000	$155,000
1981 Bonus (%)	39%	39%	43%
Fourth Highest Paid			
1982 Bonus (%)	33%	35%	38%
Salary	$74,000	$96,000	$139,000
1981 Bonus (%)	37%	38%	41%
Fifth Highest Paid			
1982 Bonus (%)	25%	30%	35%
Salary	$71,000	$90,000	$126,000
1981 Bonus (%)	33%	34%	35%

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[3] *Top Executive Compensation 1982 Edition,* p. 45.

[4] Data are derived from regression equations based on the pay of executives in 52 companies with a bonus plan that paid a bonus. The equations are shown below; the coefficient of determination is shown in parentheses.

Total Compensation

Highest paid	$\log Y = 1.5755 + 0.3259 \log X$	(60%)
Second	$\log Y = 1.5017 + 0.2996 \log X$	(56%)
Third	$\log Y = 1.3361 + 0.3190 \log X$	(61%)
Fourth	$\log Y = 1.2659 + 0.3231 \log X$	(64%)
Fifth	$\log Y = 1.2155 + 0.3251 \log X$	(67%)

Base Salary

Highest paid	$\log Y = 1.4805 + 0.3037 \log X$	(66%)
Second	$\log Y = 1.3669 + 0.2961 \log X$	(57%)
Third	$\log Y = 1.2623 + 0.2949 \log X$	(59%)
Fourth	$\log Y = 1.1700 + 0.3089 \log X$	(60%)
Fifth	$\log Y = 1.2120 + 0.2828 \log X$	(58%)

[5] *Top Executive Compensation 1982 Edition,* p. 45.

[6] *Top Executive Compensation 1980 Edition,* p. 45. See also, Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review,* First Quarter, 1981, p. 30.

Eleven (12 percent) of the 92 retailers have an executive incentive plan based on the achievement of long-term corporate financial goals, usually called a **performance share or unit plan.**[7] All are in companies with $300 million or more in sales, including 6 (14 percent) of the 43 companies with sales of $300 million to $3 billion, and five of the fifteen companies with sales of $3 billion or more. In 1978, only 3 percent of 88 retailers reported a plan.[8]

Seven retailers made a payment during 1982 under these plans to at least one of the five top-paid executives. Payments to each of these 32 executives, converted to a percentage of 1982 salary, ranged from one to 179 percent, with the median payment representing 43 percent of base salary, and the middle 50 percent between 28 and 72 percent.

Almost two-thirds (58) of the 92 retailers have a **stock option plan.**[9] These plans are more common among the largest retailers; for example, 87 percent of the companies with sales over $1 billion have a plan compared with 58 percent of the companies with sales of $200 million to $1 billion, and 41 percent of the retailers with sales in the $50 million to $200 million range.

Among the 58 companies with a stock option plan, half (29) provide for grants of *both* incentive stock options (ISO's) and nonqualified options; twenty plans grant only ISO's, and nine only nonqualified options.

Twenty-five of the 58 retailers with a plan made a regular grant of stock options during 1982. Nine of the companies granted *only* ISO's, three *only* nonqualified options, and 13 granted *both* ISO's and nonqualified options. Among the 13 plans that granted both ISO's and nonqualified options, eight limited nonqualified options to those executives who hit the $100,000 limit on ISO grants.

Twenty of the 58 retailers that granted options in 1982 provided information about the value of the option for one or more of their five top-paid executives. (The value of an option is the number of shares multiplied by the market price at the time of grant.) The median value of options for 92 executives is the equivalent of 52 percent of base salary, with the middle half ranging between 42 and 75 percent of 1982 base salary.

Stock-for-stock exercise (stock swaps) are provided for by 20 (41 percent) of the 49 plans that grant ISO's, and by half of the 38 plans that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by 15 (31 percent) of the 49 plans that grant ISO's. Most (11) limit SAR's to a small group of top management (essentially "insiders"); the other four plans grant SAR's to all ISO recipients. SAR's are provided by 15 (39 percent) of the 38 plans that grant nonqualified options. Most (12) limit SAR's to a small group of top management; the other three plans grant SAR's to all nonqualified option recipients.

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[7] For an analysis of these plans, see Laurence C. Bickford, "Long-term Incentives for Management Part 6: Performance Attainment Plans." *Compensation Review,* Third Quarter, 1981, p. 18; and Harland Fox, *Executive Incentives: Long-term Performance Share/Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

[8] *Top Executive Compensation 1978 Edition,* p. 55.

[9] For an analysis of 189 ISO plans, see Harland Fox, *Incentive Stock Option Plans.* The Conference Board, Research Bulletin No. 148, 1983.

Chapter 5

Gas and Electric Utilities

INFORMATION ABOUT THE 1982 compensation of their five highest paid executives was obtained from 92 gas and electric utilities, 79 percent of the gas and electric utilities with securities listed on the New York Stock Exchange. The 92 utilities are classified below according to 1982 operating revenue.

1982 Operating Revenue	*Utilities* Number	*Utilities* Percent
$3 billion and over	13	14%
2 - 2,999 billion	9	10
1 - 1,999 billion	24	26
500 - 999 million	18	20
400 - 499 million	15	16
100 - 399 million	13	14
Total	92	100%

Median operating revenue was $973 million, with the middle half of the utilities ranging between $478 million and $1.8 billion.

Compensation Changes

On the average, total compensation for 1982 (which includes bonus awards) was 10 percent greater than in 1981 for top executives in these gas and electric utilities. For example, in a sample of 75 chief executive officers for whom both 1981 and 1982 total compensation were available, the median increase was 10 percent, with the middle half ranging from 7 percent to 16 percent.

About the same proportion (20 percent) of these utilities made bonus awards for 1982 performance as for 1981, although the size of the awards, as a percentage of base salary, was about the same in both years.

Base salaries for 1982 were up 10 percent over 1981, a drop in the rate of salary increases. Salary increases for the chief executive officer position averaged about 12 percent during 1980 and 1981.[1]

		Percentage Increase in Salary	
Year	*Number of Companies*	*Median*	*Middle 50 Percent Range*
1982	75	10%	7% to 16%
1979 - 1981	78	24	18 to 33
1977 - 1979	99	17	8 to 25
1975 - 1977	103	18	9 to 25
1973 - 1975	93	11	1 to 18

1982 Total Compensation

For each gas and electric utility, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation paid to each of the chief executive officers in this particular sample of 92 utilities is shown in Chart 28. The median and middle 50 percent range of the pay of these

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[1] The 1979-1981 changes are from *Top Executive Compensation 1982 Edition*. The Conference Board, Report No. 827, 1982, p. 49. The 1977-1979 changes are from *Top Executive Compensation 1980 Edition*. The Conference Board, Report 793, 1980, p. 50. The 1975-1977 changes are from *Top Executive Compensation 1978 Edition*. The Conference Board, Report No. 753, 1978, p. 61. The 1973-1975 changes are from *Top Executive Compenstion 1976 Edition*. The Conference Board, Report No. 706, 1976, p. 55.

Chart 28: Compensation of the Chief Executive, by Operating Revenue

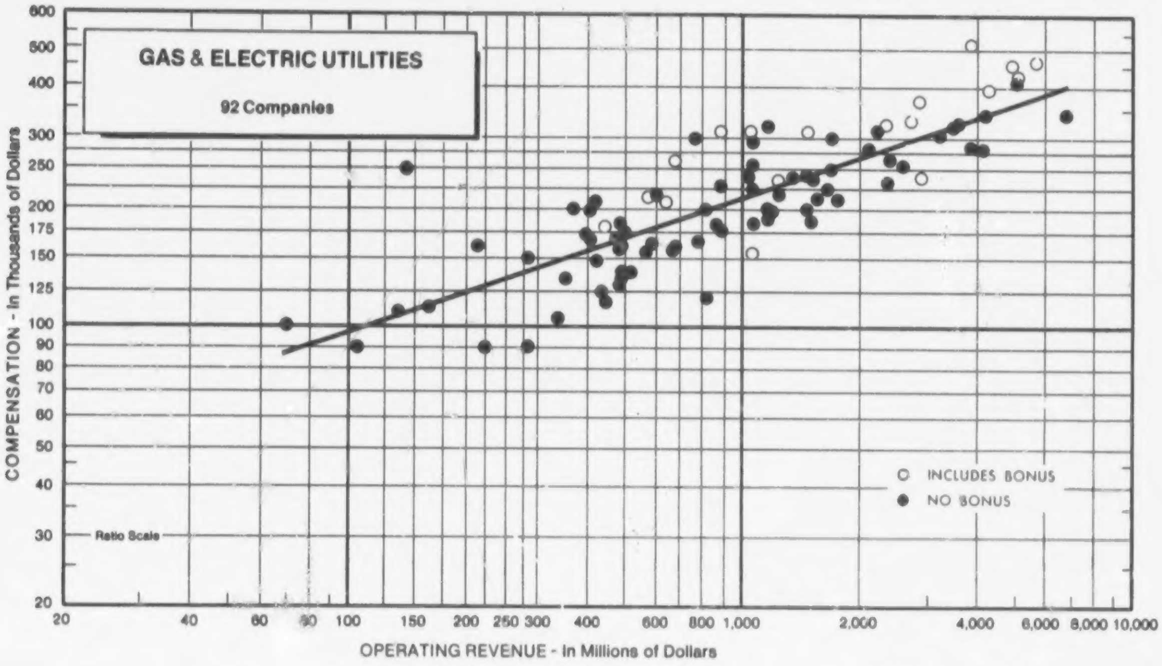
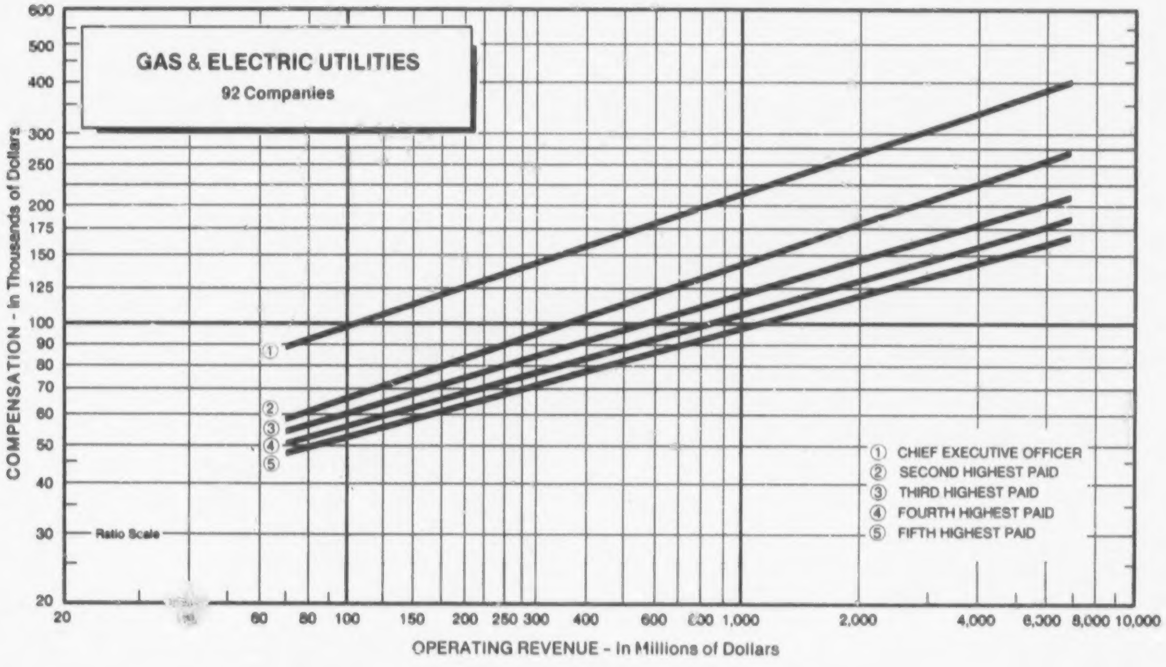


Chart 29: Compensation of the Five Highest Paid Executives, by Operating Revenue



chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	Median	Middle 50 Percent Range
Highest paid	$210,000	$160,000 to $280,000
Second	135,000	108,000 to 192,000
Third	116,000	90,000 to 156,000
Fourth	104,000	82,000 to 134,000
Fifth	95,000	79,000 to 121,000

As the lines in Chart 29 suggest, there is a positive relationship between the level of total compensation and operating revenue for all five executives. The correlation coefficients for the five lines are, respectively: .86, .80, .80, .82, and .83.

The regression lines on the chart can be used to determine the average compensation of an executive at any level of operating revenue, either by a direct reading from the chart or by using the regression formulas below. (In these formulas, Y is total compensation stated in *thousands* of dollars, and X is operating revenue stated in *millions* of dollars.)

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.3268 + 0.3345 \log X$	70%
Second	$\log Y = 1.1676 + 0.3273 \log X$	64
Third	$\log Y = 1.2207 + 0.2856 \log X$	63
Fourth	$\log Y = 1.2093 + 0.2749 \log X$	68
Fifth	$\log Y = 1.1906 + 0.2684 \log X$	69

Although total compensation and operating revenue are highly related, company size is not the sole determinant of compensation level. As the "coefficients of determination" (r^2) above indicate, the variation in operating revenue statistically explains 63 to 70 percent of the variation in total compensation of the five top-paid executives. (This coefficient is the square of the correlation coefficient.)

The ratio of the total compensation of each executive to that of the chief executive officer is shown below.

	Total Compensation as a Percentage of Chief Executive's Total Compensation	
Compensation Rank	Median	Middle 50 Percent Range
Second highest	68%	58% to 72%
Third highest	55	50 to 62
Fourth highest	51	46 to 55
Fifth highest	46	40 to 51

1982 Salary

There is also a positive relationship between base salary and operating revenue. The regression equations for the five top-paid executives are shown below. (Y is salary stated in *thousands* of dollars; X is operating revenue stated in *millions* of dollars.)

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.3965 + 0.3052 \log X$	69%
Second	$\log Y = 1.2365 + 0.2988 \log X$	64
Third	$\log Y = 1.2917 + 0.2571 \log X$	61
Fourth	$\log Y = 1.2812 + 0.2453 \log X$	65
Fifth	$\log Y = 1.2497 + 0.2440 \log X$	67

As the coefficients of determination (r^2) above indicate, the variation in operating revenue statistically explains 61 to 69 percent of the variation in base salary.

The ratio of the salary of each executive to the salary of the chief executive officer is shown below:

	Salary as a Percentage of Chief Executive's Salary	
Compensation Rank	Median	Middle 50 Percent Range
Second highest	68%	58% to 72%
Third highest	56	50 to 63
Fourth highest	51	45 to 55
Fifth highest	46	41 to 52

These ratios are practically the same as the total compensation ratios.

1982 Bonus Awards

Thirty (33 percent) of the 92 gas and electric utilities have an "annual" executive bonus plan; that is, a plan that pays a year-end bonus based on that year's corporate performance. These plans have become much more common among gas and electric utilities over the past decade; in 1972 only 8 percent of a comparable group of 115 utilities had an annual incentive plan, and, in 1980, only 13 percent.[1]

Eighteen (72 percent) of the 25 utilities with a bonus plan made an award for 1982 performance; 17 paid a bonus for 1981. (Five plans that were adopted in 1983 are excluded.)

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[1] *Top Executive Compensation 1972 Edition.* (out of print). The Conference Board, Report No. 573, 1972, p. 58; and *Top Executive Compensation 1980 Edition.* p. 49.

Among the 18 companies that paid a 1982 bonus, 13 also paid an award for 1981, but five did not. Among the seven plans that paid no bonus for 1982, four paid a 1981 bonus and three paid no bonus in either year.

The 1982 bonus award was reported for 89 of the five top-paid executives in 18 companies that paid a bonus. The median bonus is 20 percent of salary with the middle half ranging between 10 and 29 percent of base pay. (In 1981, the median bonus was 22 percent of salary for the five top-paid combined.)[3]

Long-term Incentive Plans

Five (5 percent) of the 92 utilities have a **restricted stock plan** under which contingent grants of company stock are made, subject to restrictions and forfeitures, until earned out by continued employment over a specified period of time. This is about the same proportion of utilities that had a plan three years ago; four (4 percent) of 106 companies reported a plan in 1980.[4]

Five (5 percent) of the gas and electric utilities have an executive incentive plan based on the achievement of long-term corporate financial goals, usually called a **performance share or unit plan.**[5] All plans are in companies with $500 million or more in operating revenue. In 1978, only one of 118 comparable utilities had a plan.[6]

Eighteen (20 percent) of the companies have a **stock option plan.**[7] Eleven of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; five grant only ISO's, and two have only nonqualified options.

Ten of the eighteen gas and electric utilities with a plan made a regular grant of stock options during 1982. Three of the plans granted *only* ISO's; two *only* nonqualified options; and five granted *both* ISO's and nonqualified options. Among the five plans that granted both ISO's and nonqualified options, four limited nonqualified options to those executives who hit the $100,000 limit on ISO grants.

All of the ten utilities that granted options in 1982 provided information about the value of the option for one or more of their five top-paid executives. (The value of an option is the number of shares multiplied by the market price at the time of grant.) The median value of options for 45 executives is the equivalent of 72 percent of base salary, with the middle half ranging between 46 and 100 percent of 1982 salary.

Stock-for-stock exercise (stock swaps) are provided for by six (38 percent) of the 16 plans that grant ISO's, and by four (31 percent) of the 13 plans that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by three of the sixteen plans that grant ISO's. One of these limits SAR's to a small group of top management (essentially "insiders"); the other two grant SAR's to all option recipients. SAR's are provided by four of the thirteen plans that grant nonqualified options; one limits SAR's to a limited group of top executives; the other three grant SAR's to all nonqualified option recipients.

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[3] *Top Executive Compensation 1982 Edition,* p. 45.

[4] *Top Executive Compensation 1980 Edition,* p. 40. See also, Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review,* First Quarter, 1981, p. 30.

[5] For an analysis of these plans, see Laurence C. Bickford, "Long-term Incentives for Management, Part 6: Performance Attainment Plans." *Compensation Review,* Third Quarter, 1981, p. 18; and Harland Fox, *Executive Incentives: Long-term Performance Share/Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

[6] *Top Executive Compensation 1978 Edition,* p. 61.

[7] For an analysis of 189 ISO plans, see Harland Fox, *Incentive Stock Option Plans.* The Conference Board, Research Bulletin No. 148, 1983.

Chapter 6

Commercial Banking

INFORMATION ABOUT THE 1982 compensation of their five highest paid executives was obtained from 227 commercial banks, 51 percent of approximately all commercial banks with total deposits of $300 million or more. These 227 banks are classified below according to total deposits at the end of 1982.

Total Deposits	*Banks* Number	*Banks* Percent
$5 billion and over	26	11%
2 - 4,999 billion	43	19
1 - 1,999 billion	43	19
600 - 999 million	43	19
500 - 599 million	24	11
300 - 499 million	48	21
Total	227	100%

Median total deposits are $974 million, with deposits of the middle half of the banks ranging between $550 million and $2.5 billion.

Compensation Changes

On the average, total compensation for top executives in these banks for 1982 (which includes bonus awards) was 10 percent greater than in 1981. For example, in a sample of 180 chief executive officers for whom both 1981 and 1982 total compensation was available, the median increase was 10 percent with the middle half ranging from no change to a 24 percent increase.

About the same proportion (57 percent) of these banks made bonus awards for 1982 performance as for 1981 and the size of the awards, as a percentage of base salary, was essentially the same in both years.

Base salaries in 1982 were up 10 percent over 1981, a drop in the rate of salary increases. Salary increases for the chief executive officer position averaged about 13.5 percent during 1980 and 1981.[1]

Year	*Number of Banks*	*Percentage Increase in Salary* Median	*Percentage Increase in Salary* Middle 50 Percent Range
1982	180	10%	7% to 19%
1979 - 1981	140	27	15 to 40
1977 - 1979	199	22	15 to 31
1975 - 1977	213	17	7 to 26
1973 - 1975	159	17	6 to 25

1982 Total Compensation

For each commercial bank, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation paid to each of the chief executive officers in this particular sample of 227 banks is shown in Chart 30. The

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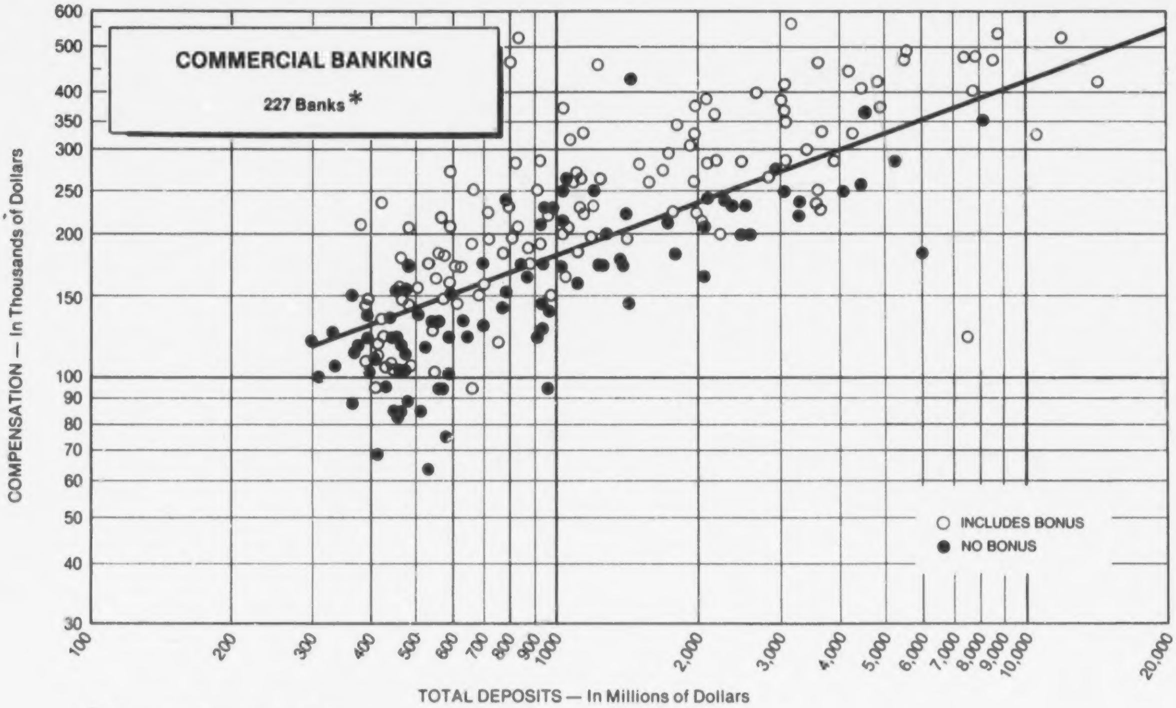
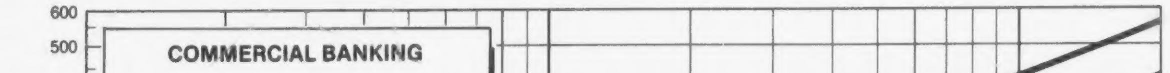
[1] The 1979-1981 changes are from Harland Fox, *Top Executive Compensation 1982 Edition.* The Conference Board, Report No. 827, 1982, p. 53. The 1977-1979 changes are from *Top Executive Compensation 1980 Edition.* The Conference Board, Report 793, 1980, p. 55. The 1975-1977 changes are from *Top Executive Compensation 1978 Edition.* The Conference Board, Report No. 753, 1978, p. 67. The 1973-1975 changes are from *Top Executive Compenstion 1976 Edition* The Conference Board, Report No. 706, 1976, p. 59.

Chart 30: Compensation of the Chief Executive, by Total Deposits



* Two banks with deposits over $20 billion not plotted

Chart 31: Compensation of the Five Highest Paid Executives, by Total Deposits



median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

Compensation Rank	1982 Total Compensation	
	Median	Middle 50 Percent Range
Highest paid	$200,000	$137,000 to $283,000
Second	135,000	88,000 to 200,000
Third	102,000	75,000 to 148,000
Fourth	90,000	66,000 to 133,000
Fifth	80,000	60,000 to 118,000

As the lines in Chart 31 suggest, there is a positive relationship between the level of total compensation and total deposits for all five executives. The correlation coefficients for the five lines are, respectively: .81, .81, .84, .84, and .82.

The regression lines on the chart can be used to determine the average compensation of an executive at any level of deposits, either by a direct reading from the chart or by using the regression formulas below. (In these formulas, Y is total compensation stated in *thousands* of dollars, and X is deposits stated in *millions* of dollars.)

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.1222 + 0.3825 \log X$	65%
Second	$\log Y = 0.8915 + 0.4016 \log X$	66
Third	$\log Y = 0.8495 + 0.3818 \log X$	70
Fourth	$\log Y = 0.8026 + 0.3794 \log X$	71
Fifth	$\log Y = 0.7836 + 0.3706 \log X$	67

Although total compensation and total deposits are highly related, company size is not the sole determinant of compensation level. As the "coefficients of determination" (r^2) above indicate, the variation in deposits statistically explains 65 to 71 percent of the variation in total compensation of the five top-paid executives. (This coefficient is the square of the correlation coefficient.)

The ratio of the total compensation of each executive to that of the chief executive officer is shown below.

Compensation Rank	Total Compensation as a Percentage of Chief Executive's Total Compensation	
	Median	Middle 50 Percent Range
Second highest	69%	60% to 78%
Third highest	54	46 to 62
Fourth highest	47	40 to 55
Fifth highest	44	36 to 49

1982 Salary

There is also a positive relationship between base salary and total deposits. The regression equations for the five top-paid executives are shown below. (Y is salary stated in *thousands* of dollars; X is deposits stated in *millions* of dollars.)

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.2456 + 0.3202 \log X$	67%
Second	$\log Y = 1.0403 + 0.3322 \log X$	67
Third	$\log Y = 0.9922 + 0.3172 \log X$	69
Fourth	$\log Y = 0.9472 + 0.3147 \log X$	74
Fifth	$\log Y = 0.9215 + 0.3101 \log X$	74

As the coefficients of determination (r^2) above indicate, the variation in total deposits statistically explains 67 to 74 percent of the variation in base salary.

The ratio of the salary of each executive to the salary of the chief executive officer is shown below:

Compensation Rank	Salary as a Percentage of Chief Executive's Salary	
	Median	Middle 50 Percent Range
Second highest	70%	60% to 79%
Third highest	54	46 to 65
Fourth highest	48	42 to 56
Fifth highest	44	38 to 51

These ratios are practically the same as the total compensation ratios.

1982 Bonus Awards

Almost 70 percent (157) of the 227 banks have an "annual" executive bonus plan; that is, a plan that pays a year-end bonus based on that year's corporate performance. These plans become more common as the size of the bank increases. Only 45 percent of the banks with total deposits under $500 million have a plan, compared with 61 percent of the banks with deposits in the $500 million to $1 billion range and 86 percent of the banks with deposits of $1 billion or more (including all but two of the twenty-six banks with deposits of $5 billion or more).

These plans have become much more common among banks over the past decade; in 1972 only 23 percent of a comparable group of banks had an annual incentive plan.[2] In 1980, 55 percent had a plan.[3]

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[2] *Top Executive Compensation 1972 Edition.* (out of print). The Conference Board, Report No. 573, 1972, p. 63.

[3] *Top Executive Compensation 1982 Edition,* p. 53.

Table 7: 1982 Bonus Awards and 1981 Median Bonus

1982 Bonus Award (Percent of Salary)	Chief Executives		Second Highest Paid		Third Highest Paid		Fourth Highest Paid		Fifth Highest Paid	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
75% and more	10	8%	9	7%	7	5%	6	4%	3	2%
60 - 74	6	5	7	5	4	3	8	6	3	2
40 - 59	24	18	21	15	17	13	13	10	12	9
30 - 39	21	16	22	16	21	16	19	14	23	17
20 - 29	39	29	28	21	30	23	30	22	32	24
10 - 19	20	15	31	23	36	27	38	29	41	30
Less than 10%	12	9	18	13	17	13	20	15	21	16
Total	132	100%	136	100%	132	100%	134	100%	135	100%
Median Bonus	28%		24%		21%		21%		20%	
Middle 50% Range	20 - 48%		16 - 45%		15 - 35%		13 - 34%		12 - 33%	
Median Salary	$188,000		$125,000		$95,000		$86,000		$80,000	
1981 Median Bonus	**28%**		**25%**		**20%**		**20%**		**20%**	

Eighty-three percent (130) of the 157 banks with a bonus plan made an award for 1982 performance; 82 percent paid a bonus for 1981. Among the 130 plans that paid a 1982 bonus, most (108) also paid a bonus for 1981, but 22 did not. Among the 27 banks that paid no bonus for 1982, twenty paid a 1981 bonus; seven paid no bonus in either year.

The median award for 1982 performance for 669 executives is 23 percent of base salary with the middle half ranging from 15 to 36 percent of salary. As Table 7 indicates, the median award for chief executive officers (28 percent of salary), is somewhat higher than that of the other four executives (20 to 24 percent of salary). Compared with bonus awards for 1981, the 1982 medians are essentially the same.[4]

For each of the five executives, the bonus award as a percentage of salary increases with company size (Table 8).[5] The comparison with 1981 suggests that bonus awards, as a percentage of salary, are somewhat higher for 1982 performance, when company size is taken into account.[6]

In general, banks that have an annual bonus plan pay about the same in base salary to their top executives as do banks that have no bonus plan. Therefore, the total compensation of bonus recipients is higher than the total compensation (salary) of executives in companies that have no bonus plan, by roughly the percentages shown in Table 8.

Long-term Incentive Plans

Twenty-eight (12 percent) of the 227 banks have a **restricted stock plan** under which contingent grants of company stock are made, subject to restrictions and forfeitures, until earned out by continued employment

Table 8: 1982 and 1981 Bonus Awards (as Percent of Salary), by Company Size

Executive	Total Deposits		
	$518 Million	$920 Million	$2.2 Billion
Chief Executive			
1982 Bonus (%)	28%	32%	37%
Salary	$137,000	$163,000	$214,000
1981 Bonus (%)	26%	28%	32%
Second Highest Paid			
1982 Bonus (%)	23%	28%	35%
Salary	$90,000	$109,000	$144,000
1981 Bonus (%)	22%	24%	28%
Third Highest Paid			
1982 Bonus (%)	21%	24%	30%
Salary	$73,000	$87,000	$115,000
1981 Bonus (%)	17%	20%	26%
Fourth Highest Paid			
1982 Bonus (%)	20%	23%	29%
Salary	$65,000	$78,000	$102,000
1981 Bonus (%)	17%	20%	24%
Fifth Highest Paid			
1982 Bonus (%)	17%	19%	26%
Salary	$60,000	$72,000	$94,000
1981 Bonus (%)	17%	17%	24%

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[4] *Top Executive Compensation 1982 Edition*. p. 54.

[5] Data are derived from regression equations based on the pay of executives in 123 banks with a bonus plan that paid a bonus. The equations are shown below; the coefficient of determination is shown in parentheses.

Total Compensation

Highest paid $\log Y = 1.2822 + 0.3543 \log X$ (68%)
Second $\log Y = 1.0120 + 0.3814 \log X$ (69%)
Third $\log Y = 0.9397 + 0.3694 \log X$ (71%)
Fourth $\log Y = 0.8868 + 0.3696 \log X$ (72%)
Fifth $\log Y = 0.8653 + 0.3608 \log X$ (71%)

Base Salary

Highest paid $\log Y = 1.3037 + 0.3069 \log X$ (67%)
Second $\log Y = 1.0874 + 0.3201 \log X$ (68%)
Third $\log Y = 1.0091 + 0.3141 \log X$ (70%)
Fourth $\log Y = 0.9745 + 0.3100 \log X$ (73%)
Fifth $\log Y = 0.9495 + 0.3057 \log X$ (73%)

[6] *Top Executive Compensation 1982 Edition*, p. 54.

over a specified period of time. Three years ago, only 7 percent (17) of a group of 248 banks had a plan.[7]

Restricted stock plans are more common among larger banks. For example, 31 percent (8) of the 26 banks with deposits of $5 billion or more have a plan, compared with 15 percent (13) of the 86 banks with deposits between $1 billion and $5 billion, and only 6 percent (7) of 115 banks with deposits in the $300 million to $1 billion range.

Thirty-five (15 percent) of the 227 banks have an executive incentive plan based on the achievement of long-term corporate financial goals, usually called a **performance share or unit plan.**[8] In 1978, only 5 percent (13) of 227 banks had a plan.[9] These plans are most common among the largest banks. For example, seven of the thirteen banks with deposits of $10 billion or more have a plan, compared with 30 percent (17) of the 56 banks with deposits of $2 to $10 billion, and seven percent (11) of the 158 banks in the $300 million to $2 billion range.

Eleven banks made a payment during 1982 under these plans to some of the five top-paid executives. Payments to 45 executives, converted to a percentage of 1982 salary, ranged from 3 percent to 260 percent, with the median payment representing 23 percent of base salary, with the middle 50-percent range from 14 to 45 percent.

Forty-four percent (99) of the banks have a **stock option plan.**[10] Plans become more common as the size of the bank increases; for example, only 15 percent of the banks with deposits in the $300 million to $600 million range have a plan compared with 35 percent of the banks with deposits of $600 million to $1 billion, and 65 percent of the banks with deposits of $1 billion or more (including practically all the banks with deposits of $10 billion or more).

Among the 99 banks with a stock option plan, more than half (55) provide for grants of *both* ISO's and nonqualified options; 36 grant only ISO's, and 18 only nonqualified options.

Fifty of the 99 banks with a plan made a regular grant of stock options during 1982. Eighteen of the banks granted *only* ISO's, eleven *only* nonqualified options, and twenty-one granted *both* ISO's and nonqualified options. Among the 21 plans that granted both ISO's and nonqualified options, 12 (57 percent) limited nonqualified options to those executives who hit the $100,000 limit on ISO grants.

All of the 50 banks that granted options in 1982 provided information about the value of the option for one or more of their five top-paid executives. (The value of an option is the number of shares multiplied by the market price at the time of grant.) The median value of options for 242 executives is the equivalent of 60 percent of base salary, with the middle half ranging between 38 and 85 percent of 1982 base salary.

Stock-for-stock exercise (stock swaps) are provided for by 36 (40 percent) of the 91 plans that grant ISO's, and by 31 (42 percent) of the 73 plans that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by 38 (42 percent) of the 91 plans that grant ISO's. Most (21) limit SAR's to a small group of top management (essentially "insiders"); the other 17 plans grant SAR's to all ISO recipients. SAR's are provided by 31 (42 percent) of the 73 plans that grant nonqualified options. Most (19) limit SAR's to a small group of top management; the other 12 plans grant SAR's to all nonqualified option recipients.

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[7] *Top Executive Compensation 1980 Edition,* p. 55. See also, Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review,* First Quarter, 1981, p. 30.

[8] For an analysis of these plans, see Laurence C. Bickford, "Long-term Incentives for Management Part 6: Performance Attainment Plans." *Compensation Review,* Third Quarter, 1981, p. 18; and Harland Fox, *Executive Incentives: Long-term Performance Share/Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

[9] *Top Executive Compensation 1978 Edition,* p. 65.

[10] For an analysis of 189 ISO plans, see Harland Fox, *Incentive Stock Option Plans.* The Conference Board, Research Bullletin No. 148, 1983.

Chapter 7

Insurance

INFORMATION ABOUT THE 1982 compensation of their five highest paid executives was obtained from 148 insurance companies, 46 percent of approximately all life insurance and property and casualty insurance companies with premium income of $50 million or more. These 148 carriers are classified below according to total premium income from all lines during 1982.

1982 Premium Income	*Total Companies*	*Life*	*Property and Casualty*
$2 billion and over.......	13	8	5
1 - 1,999 billion.........	12	5	7
500 - 999 million........	16	11	5
300 - 499 million........	12	8	4
200 - 299 million........	29	18	11
100 - 199 million........	42	27	15
50 - 99 million.........	24	13	11
Total...............	148	90	58

The median premium income for all companies is $209 million, with the middle half ranging from $135 million to $608 million. For life insurance companies, median premium income is $209 million compared with $201 million for property and casualty companies. For the 71 stock companies, median premium income is $200 million; for the 77 mutual companies, $255 million.

Compensation Changes

On the average, total compensation for 1982 (which includes bonus awards) was 9 percent greater than in 1981 for top executives in these insurance companies. For example, in a sample of 111 chief executive officers for whom both 1981 and 1982 total compensation were available, the median increase was 9 percent, with the middle half ranging from no increase to an increase of 18 percent.

About the same proportion (46 percent) of these carriers made bonus awards for 1982 performance as did so for 1981, although the size of the awards, as a percentage of base salary, was off somewhat.

Base salaries for 1982 were up 10 percent over 1981, a sharp drop in the rate of salary increases. Salary increases for the chief executive officer position averaged about 13 percent during 1980 and 1981.[1]

		Percentage Increase in Salary	
Year	*Number of Companies*	*Median*	*Middle 50 Percent Range*
1982................	111	10%	1% to 17%
1979 - 1981..........	88	26	17 to 35
1977 - 1979..........	135	22	13 to 32
1975 - 1977..........	145	16	10 to 23
1973 - 1975..........	115	15	1 to 29

1982 Total Compensation

For each insurance company, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid ex-

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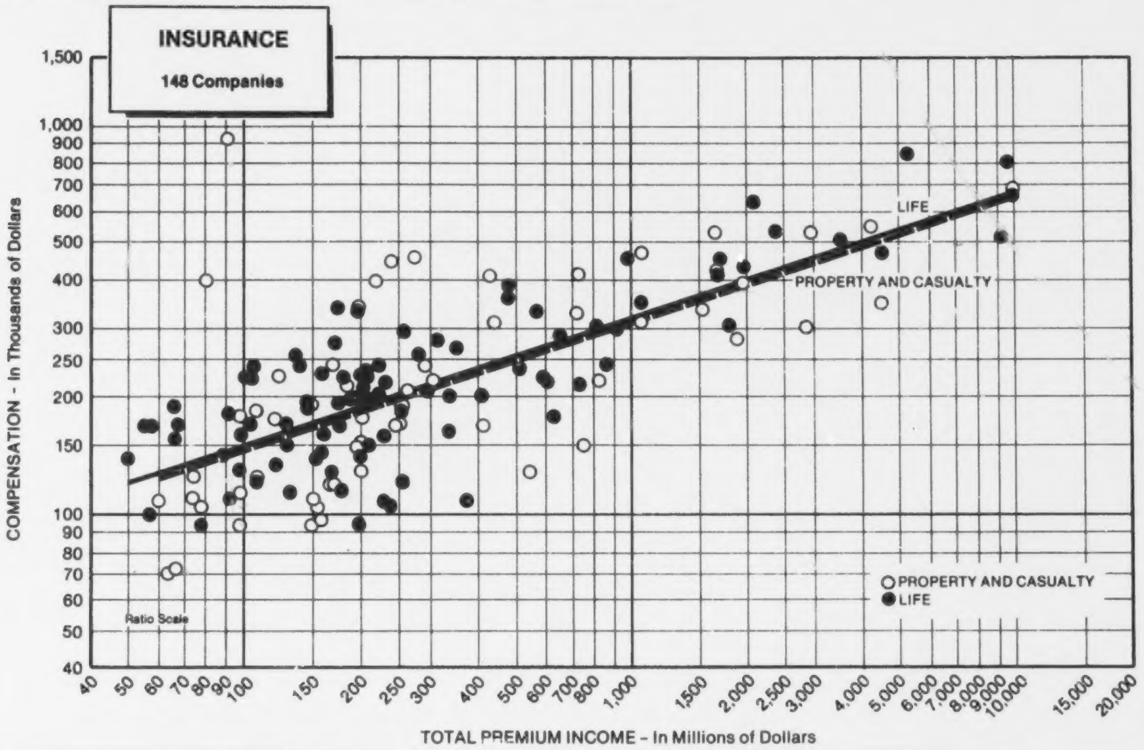
[1] The 1979-1981 changes are from *Top Executive Compensation 1982 Edition*. The Conference Board, Report No. 827, 1982, p. 57. The 1977-1979 changes are from *Top Executive Compensation 1980 Edition*. The Conference Board, Report 793, 1980, p. 61. The 1975-1977 changes are from *Top Executive Compensation 1978 Edition*. The Conference Board, Report No. 753, 1978, p. 72. The 1973-1975 changes are from *Top Executive Compenstion 1976 Edition*. The Conference Board, Report No. 706, 1976, p. 65.

Chart 32: Compensation of the Chief Executive, by Total Premium Income



ecutive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation paid to each of the chief executive officers in this particular sample of 148 insurance companies is shown in Chart 32. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

	1982 Total Compensation	
Compensation Rank	*Median*	*Middle 50 Percent Range*
Highest paid	$200,000	$143,000 to $313,000
Second	131,000	93,000 to 198,000
Third	104,000	78,000 to 150,000
Fourth	93,000	72,000 to 128,000
Fifth	85,000	66,000 to 113,000

As Charts 32, 33 and 34 indicate, there is a positive relationship between total premium income and total compensation for the chief executive officers in life insurance companies and in property and casualty companies.

The regression equations for the executives in the 58 property and casualty companies are shown below. As the coefficients of determination (r^2) indicate, the variation in total premium income statistically explains 42 to 47 percent of the variation in total compensation of the five top-paid executives.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.5341 + 0.3191 \log X$	42%
Second...........	$\log Y = 1.3543 + 0.3114 \log X$	46
Third............	$\log Y = 1.2790 + 0.3054 \log X$	47
Fourth...........	$\log Y = 1.2976 + 0.2757 \log X$	43
Fifth	$\log Y = 1.2566 + 0.2716 \log X$	45

The regression equations for the five top-paid executives in the 90 life insurance companies are shown below. The coefficients of determination (r^2) indicate that the variation in premium income statistically explains 53 to 70 percent of the variation in total compensation of the executives.[2]

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[2] The regression equations for the five executives when all companies are combined are shown below; the percent in parentheses is the coefficient of determination.

Highest paid.........	$\log Y = 1.5290 + 0.3239 \log X$	(54%)
Second.............	$\log Y = 1.3324 + 0.3278 \log X$	(59%)
Third...............	$\log Y = 1.2867 + 0.3117 \log X$	(58%)
Fourth.............	$\log Y = 1.2855 + 0.2903 \log X$	(56%)
Fifth...............	$\log Y = 1.2496 + 0.2827 \log X$	(49%)

In each case, Y is total compensation stated in *thousands* of dollars; X is total premium income stated in *millions* of dollars.

Chart 33: Compensation of the Five Highest Paid Executives, by Total Premium Income

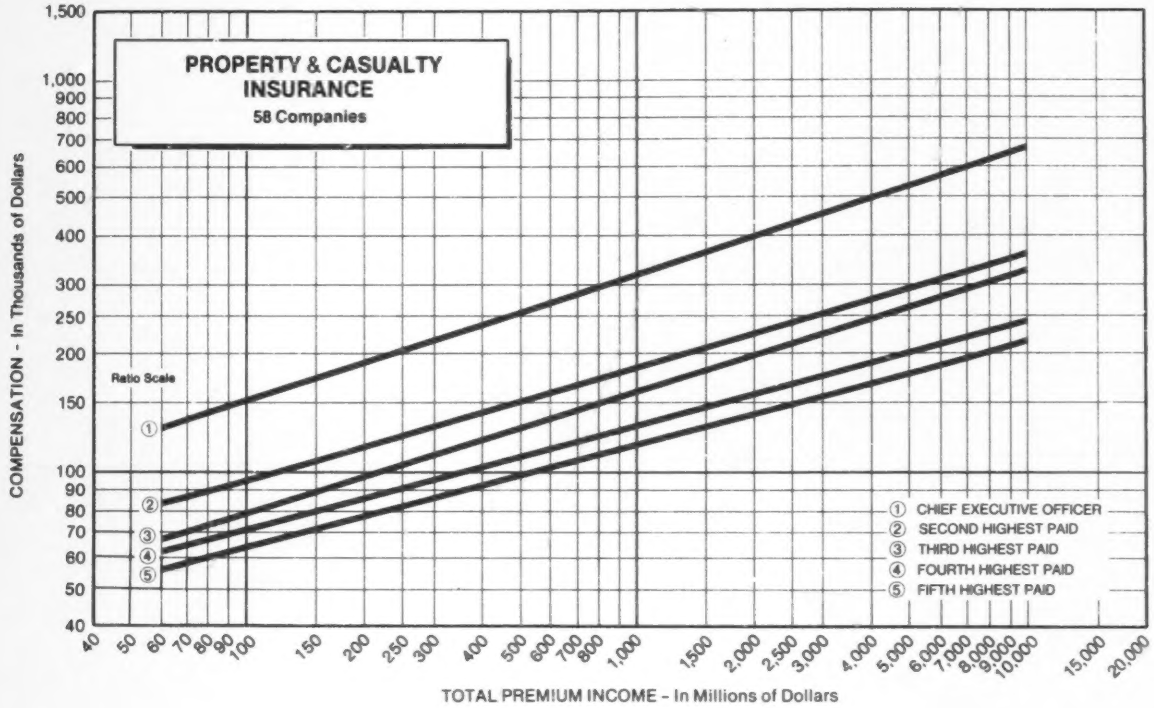
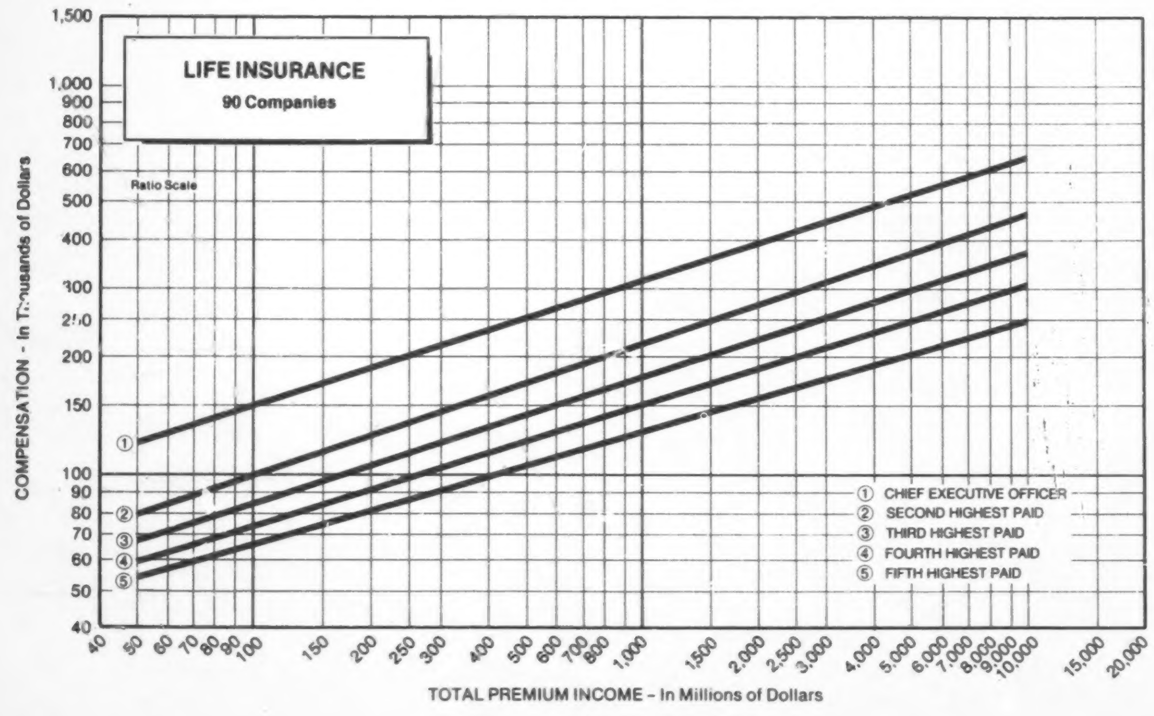


Chart 34: Compensation of the Five Highest Paid Executives, by Total Premium Income



Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.5247 + 0.3275 \log X$	66%
Second...........	$\log Y = 1.3153 + 0.3397 \log X$	70
Third............	$\log Y = 1.2886 + 0.3170 \log X$	68
Fourth...........	$\log Y = 1.2742 + 0.3012 \log X$	69
Fifth	$\log Y = 1.2421 + 0.2911 \log X$	53

The ratio of the total compensation of each executive to that of the chief executive officer is shown below.

Compensation Rank	Total Compensation as a Percentage of Chief Executive's Total Compensation: Median	Middle 50 Percent Range
Second highest	67%	57% to 75%
Third highest..........	56	48 to 62
Fourth highest.........	49	41 to 56
Fifth highest	42	38 to 50

These ratios are essentially the same in life insurance companies and property and casualty companies.

1982 Salary

There is a positive relationship between base salary and total premium income. The regression equations for executives in the 58 property and casualty companies are shown below. As the coefficients of determination (r^2) indicate, the variation in premium income statistically explains 39 to 49 percent of the variation in base salary.

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.6313 + 0.2539 \log X$	39%
Second...........	$\log Y = 1.4569 + 0.2443 \log X$	44
Third............	$\log Y = 1.3459 + 0.2548 \log X$	49
Fourth...........	$\log Y = 1.3507 + 0.2325 \log X$	42
Fifth	$\log Y = 1.3365 + 0.2191 \log X$	41

The regression equations for the executives in the 90 life insurance companies are shown below. The coefficients of determination indicate that the variation in premium income statistically explains 51 to 68 percent of the variation in base salary.[3]

Compensation Rank	Regression Formula	r^2
Highest paid	$\log Y = 1.5089 + 0.3138 \log X$	64%
Second...........	$\log Y = 1.3302 + 0.3183 \log X$	68
Third............	$\log Y = 1.2972 + 0.2983 \log X$	66
Fourth...........	$\log Y = 1.2894 + 0.2808 \log X$	65
Fifth	$\log Y = 1.2600 + 0.2713 \log X$	51

The ratio of the salary of each executive to the salary of the chief executive officer is shown below.

Compensation Rank	Salary as a Percentage of Chief Executive's Salary: Median	Middle 50 Percent Range
Second highest...........	68%	57% to 76%
Third highest............	56	49 to 64
Fourth highest...........	49	42 to 57
Fifth highest	44	38 to 52

These ratios are practically the same as the total compensation ratios.

1982 Bonus Awards

Ninety-two (62 percent) of the 148 insurance companies have an annual executive bonus plan; that is, a plan that pays a year-end bonus based on that year's corporate performance. These plans have become much more common among insurance companies over the past decade; in 1972 only 24 percent of a roughly comparable group of life insurance, fire, marine and casualty companies had an annual incentive plan.[4] By 1980, 52 percent had a plan.[5]

In general, an annual bonus plan is more common as company size increases. For example, 80 percent of the carriers with premium income of $1 billion or more have a plan, compared with 61 percent of the companies with premium income of $100 million to $1 billion and 50 percent of the companies with premium income of $50 million to $100 million.

Plans are more common among property and casualty companies (71 percent) than among life companies (57 percent). About the same proportion of stock (73 percent) and mutual (70 percent) companies have a plan.

Almost three-fourths (68) of the 92 carriers with a bonus plan made an award for 1982 performance; about the same number (70) paid a bonus for 1981. Among the 68 companies that paid a 1982 bonus, most (61) also paid a 1981 bonus but a few (7) did not. Among the 24 com-

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[3] The regression equations for the five executives when all companies are combined are shown below; the percent in the parentheses is the coefficient of determination.

Highest paid	$\log Y = 1.5588 + 0.2894 \log X$	(52%)
Second.............	$\log Y = 1.3833 + 0.2877 \log X$	(57%)
Third..............	$\log Y = 1.3195 + 0.2798 \log X$	(57%)
Fourth	$\log Y = 1.3167 + 0.2605 \log X$	(54%)
Fifth...............	$\log Y = 1.2930 + 0.2495 \log X$	(46%)

In each case Y is salary stated in *thousands* of dollars and X is total premium income stated in *millions* of dollars.

[4] *Top Executive Compensation 1972 Edition,* (out of print). The Conference Board Report No. 573, 1972, pp. 68 and 72.

[5] *Top Executive Compensation 1980 Edition,* p. 59.

Table 9: 1982 Bonus Awards and 1981 Median Bonus

1982 Bonus Award (Percent of Salary)	*Chief Executives*		*Second Highest Paid*		*Third Highest Paid*		*Fourth Highest Paid*		*Fifth Highest Paid*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
60% or more	11	16%	6	9%	4	6%	3	4%	1	1%
40 - 59	10	15	8	12	9	13	8	12	4	6
30 - 39	11	16	15	23	9	13	10	15	11	16
20 - 29	16	24	13	20	20	30	13	19	20	30
10 - 19	14	22	21	31	22	32	27	41	22	34
Less than 10%	5	7	3	5	4	6	6	9	9	13
Total	67	100%	66	100%	68	100%	67	100%	67	100%
Median Bonus	27%		25%		24%		21%		20%	
Middle 50% Range	17 - 43%		15 - 37%		15 - 36%		15 - 32%		12 - 29%	
Median Salary	$212,000		$134,000		$105,000		$92,000		$84,000	
1981 Median Bonus	32%		27%		25%		23%		21%	

panies that paid no bonus for 1982, nine paid a bonus for 1981; the other 15 paid no bonus in either year.

The median award for 1982 performance for 335 executives is 23 percent of base salary, with the middle half ranging from 15 to 33 percent of salary. As Table 9 indicates, the median award for chief executive officers (27 percent of salary) is somewhat higher than that of the other four executives (20 to 25 percent). Compared with bonus awards for 1981, the 1982 medians are somewhat smaller.[6]

For each of the top five executives, the bonus award tends to increase, as a percentage of salary, with company size (Table 10).[7] Again, the 1982 medians are somewhat smaller at each size level than in 1981.[8]

In general, insurance companies that have a bonus plan pay about the same in base salary to their top executives as do carriers that do not have a bonus plan. Therefore, the total compensation of bonus recipients is higher than the total compensation (salary) of executives in companies with no bonus, by roughly the percentages shown in Table 8.

Long-term Incentive Plans

Sixteen (23 percent) of the 71 stock companies have a **restricted stock plan** under which contingent grants of company stock are made, subject to restrictions and forfeitures, until earned out by continued employment over a specified period of time. This is a somewhat greater proportion of companies with a plan than in 1980; eight (9 percent) of 94 stock companies reported a plan then.[9]

Table 10: 1982 and 1981 Bonus Awards (as Percent of Salary), by Company Size

	Total Premium Income		
Executive	*$114 Million*	*$225 Million*	*$754 Million*
Chief Executive			
1982 Bonus (%)	34%	34%	35%
Salary	$157,000	$189,000	$264,000
1981 Bonus (%)	31%	32%	37%
Second Highest Paid			
1982 Bonus (%)	25%	28%	32%
Salary	$103,000	$125,000	$177,000
1981 Bonus (%)	27%	30%	34%
Third Highest Paid			
1982 Bonus (%)	24%	25%	28%
Salary	$85,000	$102,000	$141,000
1981 Bonus (%)	23%	27%	30%
Fourth Highest Paid			
1982 Bonus (%)	22%	24%	26%
Salary	$77,000	$91,000	$124,000
1981 Bonus (%)	22%	25%	29%
Fifth Highest Paid			
1982 Bonus (%)	19%	21%	25%
Salary	$69,000	$82,000	$111,000
1981 Bonus (%)	22%	23%	27%

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[6] *Top Executive Compensaton 1982 Edition,* p. 60.

[7] Data are derived from regression equations based on the pay of executives in 63 companies with a bonus plan that paid a bonus for 1982. The equations are shown belown, the coefficient of determination is in parentheses.

Total Compensation

Highest paid	$\log Y = 1.7510 + 0.2773 \log X$	(43%)
Second	$\log Y = 1.4722 + 0.3109 \log X$	(61%)
Third	$\log Y = 1.4286 + 0.2883 \log X$	(56%)
Fourth	$\log Y = 1.4260 + 0.2666 \log X$	(51%)
Fifth	$\log Y = 1.3348 + 0.2804 \log X$	(55%)

Base Salary

Highest paid	$\log Y = 1.6322 + 0.2743 \log X$	(46%)
Second	$\log Y = 1.4273 + 0.2847 \log X$	(57%)
Third	$\log Y = 1.3674 + 0.2722 \log X$	(56%)
Fourth	$\log Y = 1.3612 + 0.2544 \log X$	(49%)
Fifth	$\log Y = 1.3187 + 0.2522 \log X$	(51%)

[8] *Top Executive Compensation 1982 Edition,* p. 60.

[9] *Top Executive Compensation 1980 Edition,* p. 80. See also, Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review,* First Quarter, 1981, p. 30.

Eighteen (12 percent) of the 148 insurance companies have an executive incentive plan, usually called a **performance share or unit plan,** based on the achievement of long-term corporate financial goals.[10] In 1978, only 4 percent (eight) of 189 carriers had a plan.[11] Only 4 percent of the mutual companies have a plan compared with 21 percent of the stock companies. Similarly, 25 percent (seven) of the 28 companies with premium income of $1 billion or more have a plan, but only nine percent (11) of the 123 smaller carriers.

During 1982, eight companies made a payment under these plans to each of the five top-paid executives. As a percentage of 1982 salary, payments to these 40 executives ranged from 1 percent to 223 percent, with the median payment representing 20 percent of base salary and the middle 50 percent ranging from 15 to 46 percent.

Almost half (34) of the 71 stock companies have a **stock option plan,**[12] including 80 percent of the ten companies with premium income of $1 billion or more but only 36 percent of the smaller stock companies. Fourteen (41 percent) of the plans provide for grants of both incentive stock options (ISO's) and nonqualified options; 12 grant only ISO's and eight, only nonqualified options.

Fifteen of the 34 stock companies with a plan made a regular grant of stock options during 1982. Eight of the plans granted *only* ISO's; the other seven granted *both* ISO's and nonqualified options. Among the seven plans that granted *both* ISO's and nonqualified options, five limited nonqualified options to those executives who hit the $100,000 limit on ISO grants.

Fourteen of the fifteen stock companies that granted options in 1982 provided information about the value of the option for one or more of their five top-paid executives. (The value of an option is the number of shares multiplied by the market price at the time of grant.) The median value of options for 66 executives is the equivalent of 89 percent of base salary, with the middle half ranging between 33 and 136 percent of 1982 base salary.

Stock-for-stock exercise (stock swaps) are provided for by nine (35 percent) of the twenty-six plans that grant ISO's, and by seven (32 percent) of the 22 plans that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by ten (38 percent) of the 26 plans that grant ISO's. Three of these plans limit SAR's to a small group of top executives (essentially, "insiders"); the other seven plans grant SAR's to all ISO recipients. SAR's are provided by eight (36 percent) of the twenty-two plans that grant nonqualified options. Three plans limit SAR's to a small group of top management; the other five grant SAR's to all nonqualified option recipients.

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[10] For an analysis of these plans, see Laurence C. Bickford, "Long-term Incentives for Management Part 6: Performance Attainment Plans." *Compensation Review,* Third Quarter, 1981, p. 18; and Harland Fox, *Executive Incentives: Long-term Performance Share/Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

[11] *Top Executive Compensation 1978 Edition,* p. 71.

[12] For an analysis of 189 ISO plans, see Harland Fox, *Incentive Stock Option Plans.* The Conference Board, Research Bulletin No. 148, 1983.

Chapter 8
Construction

INFORMATION ABOUT THE 1982 compensation of their five highest paid executives was obtained from 86 construction companies, 43 percent of the 200 largest.[1] These 86 construction companies are classified below according to 1982 sales volume.

1982 Sales	*Number of Companies*	*Companies Whose Stock Is:* Traded	*Not Traded*
$500 million and over . . .	14	12	2
200 - 499 million	13	5	8
100 - 199 million	27	7	20
50 - 99 million	19	2	17
Less than 50 million	13	2	11
Total	86	28	58

The median sales for the group is $124 million, with the middle half ranging between $73 million and $312 million.

Most (58) of the companies do not have stock traded on an organized exchange. They are relatively small companies and, except for five companies, are engaged primarily in construction, with little or no design activity. The median sales volume of the group is $105 million.

The 28 publicly held companies are much larger; their median sales volume is $413 million. Fourteen of the companies are subsidiaries of other companies. It is the parent company's stock that is traded in these companies.

Compensation Changes

On the average, total compensation for 1982 (which includes bonus awards) was 3 percent greater than in 1981 for top executives in these construction companies. For example, in a sample of 52 chief executive officers for whom both 1981 and 1982 total compensation was available, the median change was 3 percent, with the middle half ranging from a cut of 11 percent to an increase of 12 percent.

Only 65 percent of the contractors paid a bonus for 1982 performance compared with 73 percent for 1981. In addition, the size of 1982 bonus awards, as a percentage of salary, was significantly lower than 1981 awards.

Base salaries for 1982 were up 8 percent over 1981, a significant drop in the rate of salary increases. Salary increases for the chief executive officer position averaged about 13.5 percent during 1980 and 1981.[2]

Year	*Number of Companies*	*Percentage Increase in Salary* Median	*Middle 50 Percent Range*
1982	52	8%	0% to 12%
1979 - 1981	34	27	15 to 43
1977 - 1979	47	19	10 to 31
1975 - 1977	54	20	6 to 35

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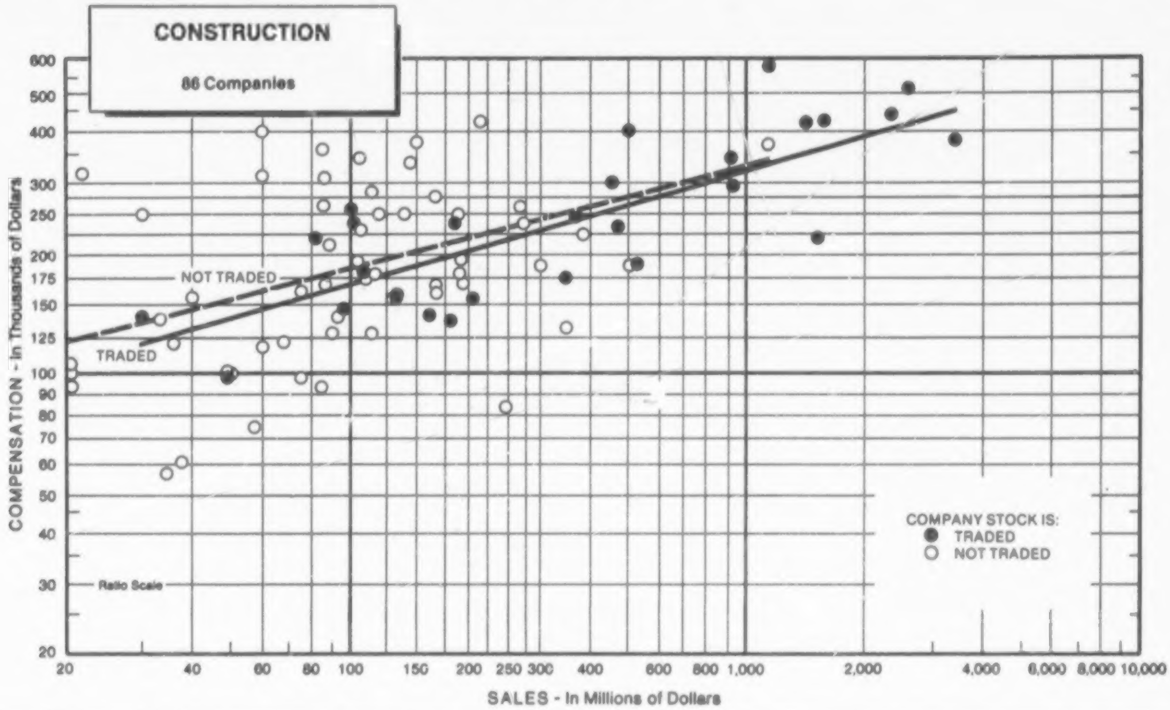
[1] "ENR 400 Largest Construction Contractors 1983." *Engineering News-Record,* April 28, 1983, p. 64.

[2] The 1979-1981 changes are from *Top Executive Compensation 1982 Edition.* The Conference Board, Report No. 827, 1982, p. 63. The 1977-1979 changes are from *Top Executive Compensation 1980 Edition.* The Conference Board, Report 793, 1980, p. 66. The 1975-1977 changes are from *Top Executive Compensation 1978 Edition.* The Conference Board, Report No. 753, 1978, p. 79.

Chart 35: Compensation of the Chief Executive, by Company Sales



1982 Total Compensation

For each construction company, compensation data were obtained for the five highest paid executives, without regard to title or function. As a rule, the highest paid executive is the chief executive officer and the second highest paid is the chief operating officer.

The 1982 *total compensation* of each of the five highest paid executives in each company is measured as the sum of 1982 salary and 1982 bonus award. The total compensation paid to each of the chief executive officers in this sample of 86 construction companies is shown in Chart 35. The median and middle 50 percent range of the pay of these chief executive officers and the other four executives are shown below.

Compensation Rank	*1982 Total Compensation*	
	Median	*Middle 50 Percent Range*
Highest paid	$193,000	$141,000 to $300,000
Second	124,000	91,000 to 203,000
Third	100,000	82,000 to 156,000
Fourth	90,000	69,000 to 141,000
Fifth	83,000	63,000 to 124,000

There is a positive relationship between the level of total compensation and sales volume, as the lines in Chart 35 indicate. However, the relationship is not very strong in the 58 closely held companies. As the coefficients of determination (r^2) below indicate, the variation in sales volume explains only 15 percent of the variation in total compensation for chief executives and, at most, 35 percent for the other four executives.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.7650 + 0.2536 \log X$	15%
Second	$\log Y = 1.4535 + 0.3210 \log X$	32
Third	$\log Y = 1.4884 + 0.2621 \log X$	27
Fourth	$\log Y = 1.4062 + 0.2729 \log X$	30
Fifth	$\log Y = 1.3708 + 0.2658 \log X$	35

The regression equations for executives in 28 companies whose stock is publicly held is shown below. As the coefficients of determination indicate, sales explains a much higher proportion of this variation in total compensation than for closely held contractors.[1]

---

[1] The regression equations for the five executives when all companies are combined are shown below; the percent in parentheses is the coefficient of determination.

Highest paid	$\log Y = 1.7511 + 0.2562 \log X$	(32%)
Second	$\log Y = 1.4805 + 0.3011 \log X$	(51%)
Third	$\log Y = 1.5091 + 0.2469 \log X$	(45%)
Fourth	$\log Y = 1.4512 + 0.2484 \log X$	(48%)
Fifth	$\log Y = 1.3942 + 0.2545 \log X$	(55%)

In each case, Y is total compensation stated in *thousands* of dollars; and X is sales volume stated in *millions* of dollars.

Chart 36: Compensation of the Five Highest Paid Executives, by Company Sales

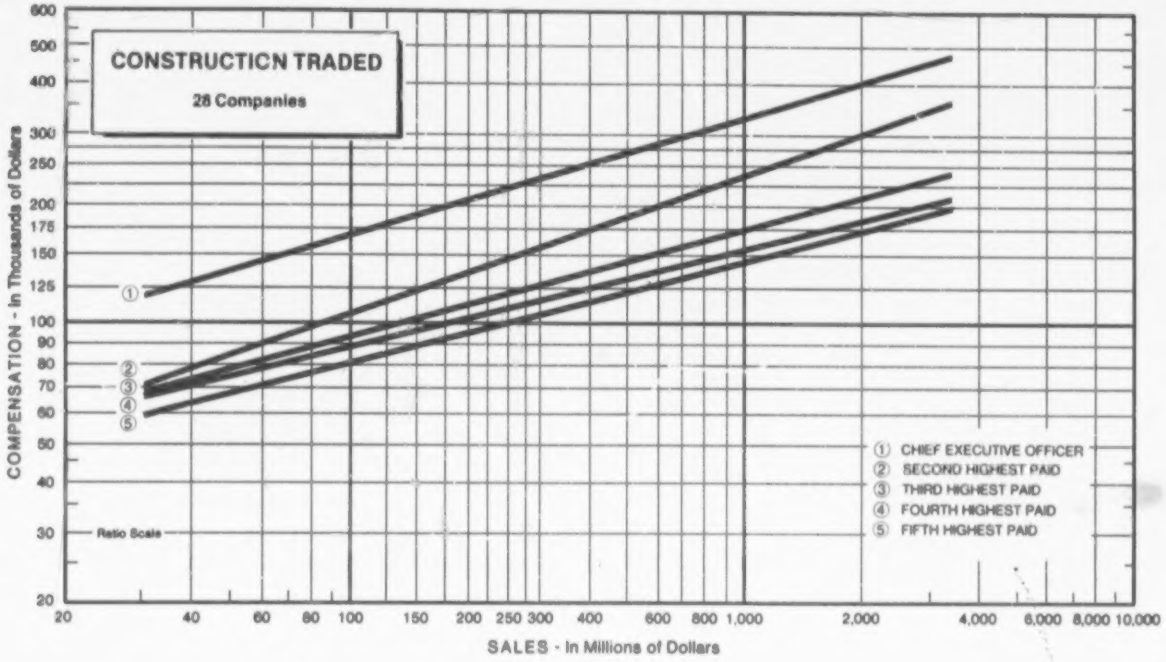
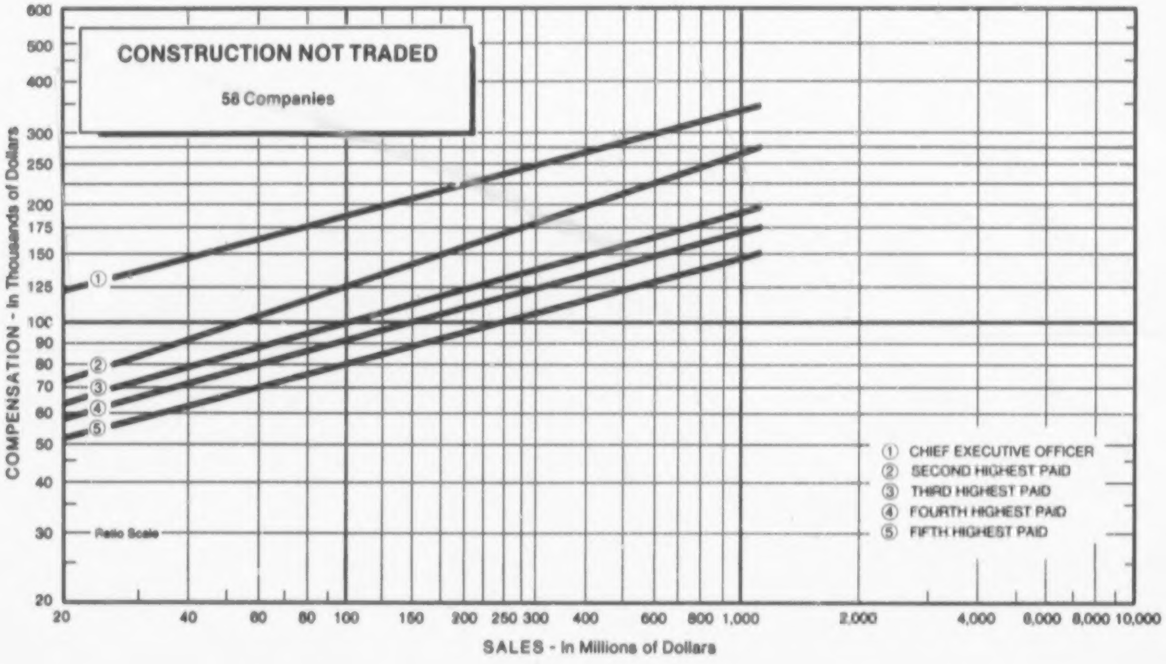


Chart 37: Compensation of the Five Highest Paid Executives, by Company Sales



Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.6428 + 0.2910 \log X$	66%
Second...........	$\log Y = 1.3721 + 0.3326 \log X$	78
Third............	$\log Y = 1.4279 + 0.2705 \log X$	71
Fourth...........	$\log Y = 1.4602 + 0.2422 \log X$	73
Fifth	$\log Y = 1.4230 + 0.2433 \log X$	74

The ratio of the total compensation of each executive to the total compensation of the chief executive officer is shown below.

Compensation Rank	*Total Compensation as a Percentage of Chief Executive's Total Compensation*	
	Median	*Middle 50 Percent Range*
Second highest	72%	57% to 86%
Third highest..........	56	43 to 70
Fourth highest.........	51	37 to 63
Fifth highest	46	32 to 57

These ratios are essentially the same among publicly held contractors and those whose stock is not traded.

1982 Salary

There is a positive relationship between base salary and sales volume. The regression equations for executives in the 28 companies whose stock is publicly held is shown below. As the coefficients of determination (r^2) indicate, variation in sales volume statistically explains 52 to 73 percent of the variation in base salary.

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.6577 + 0.2415 \log X$	52%
Second...........	$\log Y = 1.4067 + 0.2817 \log X$	73
Third............	$\log Y = 1.4196 + 0.2404 \log X$	69
Fourth...........	$\log Y = 1.4493 + 0.2142 \log X$	62
Fifth	$\log Y = 1.4242 + 0.2152 \log X$	62

The regression equations for the executives in the 58 companies whose stock is not traded are shown below. The coefficients of determination indicate that the variation in sales volume statistically explains, at most, 33 percent of the variation in salary and, for the chief executive officer, only 13 percent.[4]

Compensation Rank	*Regression Formula*	r^2
Highest paid	$\log Y = 1.6798 + 0.2128 \log X$	13%
Second...........	$\log Y = 1.4461 + 0.2540 \log X$	23
Third............	$\log Y = 1.3987 + 0.2453 \log X$	26
Fourth...........	$\log Y = 1.3612 + 0.2404 \log X$	28
Fifth	$\log Y = 1.3753 + 0.2195 \log X$	33

The ratio of the salary of each executive to the salary of the chief executive officer is shown below:

Compensation Rank	*Salary as a Percentage of Chief Executive's Salary*	
	Median	*Middle 50 Percent Range*
Second highest	74%	59% to 86%
Third highest..........	61	47 to 76
Fourth highest.........	53	43 to 69
Fifth highest	49	39 to 65

These ratios are practically the same as the total compensation ratios.

1982 Bonus Awards

Seventy-one (83 percent) of the 86 construction companies have an annual executive bonus plan; that is, a plan that pays a year-end bonus based on that year's corporate performance. Plans are more common among publicly held contractors (89 percent) than among the privately owned firms (79 percent). Similarly, plans are more common among companies with sales of $100 million or more (85 percent) than among smaller companies (78 percent). The high incidence of an annual bonus plan in this sector was apparent in 1978 when 82 percent reported a plan.[5]

Seventy-nine percent (56) of the 71 contractors with a bonus plan made an award for 1982 performance; however, 89 percent (63) paid a bonus for 1981. Among the 56 plans that paid a 1982 bonus, most (54) also paid a 1981 bonus. Among the fifteen companies that paid no bonus for 1982, nine paid a 1981 bonus; six paid no bonus in either year.

The median award for 1982 performance for 269 executives is 40 percent of base salary, with the middle half ranging from 24 to 74 percent of salary. As Table 11 indicates, the median award for chief executive officers (49 percent of salary) is higher than that of the other four executives (29 to 41 percent of salary). Compared with

[4] The regression equations for the five executives when all companies are combined are shown below; the percent in the parentheses is the coefficient of determination.

Highest paid.........	$\log Y = 1.6179 + 0.2488 \log X$	(34%)
Second.............	$\log Y = 1.3992 + 0.2802 \log X$	(48%)
Third..............	$\log Y = 1.3971 + 0.2472 \log X$	(48%)
Fourth.............	$\log Y = 1.3698 + 0.2392 \log X$	(48%)
Fifth..............	$\log Y = 1.3523 + 0.2359 \log X$	(56%)

In each case Y is total compensation stated in *thousands* of dollars and X is sales volume stated in *millions of dollars*.

[5] *Top Executive Compensation 1978 Edition*, p. 77.

Table 11: 1982 Bonus Awards and 1981 Median Bonus

1982 Bonus Award (Percent of Salary)	*Chief Executives*		*Second Highest Paid*		*Third Highest Paid*		*Fourth Highest Paid*		*Fifth Highest Paid*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
200% or more	5	9%	3	5%	2	4%	1	2%	—	—
100 - 199	11	19	8	14	7	13	5	9	5	10%
75 - 99	6	11	5	9	3	5	3	6	3	6
50 - 74	6	11	9	16	7	13	12	22	8	17
40 - 49	7	12	4	7	9	16	4	8	3	6
30 - 39	11	19	15	27	5	9	4	8	5	10
20 - 29	7	12	6	11	12	22	13	24	7	15
Less than 20%	4	7	6	11	10	18	11	21	17	36
Total	57	100%	56	100%	55	100%	53	100%	48	100%
Median Bonus	49%		41%		40%		33%		29%	
Middle 50% Range	30 - 100%		31 - 90%		24 - 76%		23 - 66%		18 - 58%	
Median Salary	$132,000		$96,000		$76,000		$71,000		$70,000	
1981 Median Bonus	**57%**		**45%**		**44%**		**36%**		**36%**	

bonus awards for 1981, the 1982 medians are 3 to 9 percentage points lower.[6]

Long-term Incentive Plans

Eleven (39 percent) of the 28 contractors whose stock is traded have a **restricted stock plan** under which contingent grants of company stock are made, subject to restrictions and forfeitures, until earned out by continued employment over a specified period of time. This is about the same proportion of publicly held contractors that had a plan three years ago; six (30 percent) of twenty companies reported a plan then.[7]

Four (14 percent) of the 28 publicly held companies have an executive incentive plan based on the achievement of long-term corporate financial goals, usually called a **performance share or unit plan.**[8] In 1978, three of twenty-seven publicly held companies reported a plan.[9]

Seventeen (61 percent) of the 28 publicly held companies have a **stock option plan.**[10] Eleven of these plans provide for grants of *both* incentive stock options (ISO's) and nonqualified options; four grant only ISO's, and two only nonqualified options.

Ten of the seventeen publicly held companies with a plan made a regular grant of stock options during 1982. Five of the plans granted *only* ISO's; three *only* nonqualified options; and two granted *both* ISO's and nonqualified options. The two plans that granted both ISO's and nonqualified options, did not limit nonqualified options to those executives who hit the $100,000 limit on ISO grants.

Seven of the ten publicly held companies that granted options in 1982 provided information about the value of the options for one or more of their five top-paid executives. (The value of an option is the number of shares multiplied by the market price at the time of grant.) The median value of options for 31 executives is the equivalent of 40 percent of base salary, with the middle half ranging between 24 and 79 percent of 1982 base salary.

Stock-for-stock exercise (stock swaps) are provided for by nine (60 percent) of the fifteen plans that grant ISO's, and by nine (69 percent) of the thirteen plans that grant nonqualified options.

Stock appreciation rights (SAR's) are provided by six of the fifteen plans that grant ISO's. Four limit SAR's to a small group of top executives (essentially, "insiders"); the other two grant SAR's to all ISO recipients. SAR's are provided by six of the thirteen plans that grant nonqualified options. Four limit SAR's to a small group of top management; the other two plans grant SAR's to all nonqualified option recipients.

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[6] *Top Executive Compensation 1982 Edition,* p. 66.

[7] *Top Executive Compensation 1980 Edition,* p. 65. See also, Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review,* First Quarter, 1981, p. 30.

[8] For an analysis of these plans, see Laurence C. Bickford, "Long-term Incentives for Management, Part 6: Performance Attainment Plans." *Compensation Review,* Third Quarter, 1981, p. 18; and Harland Fox, *Executive Incentives: Long-term Performance Share/Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

[9] *Top Executive Compensation 1978 Edition,* p. 77.

[10] For an analysis of 189 ISO plans, see Harland Fox, *Incentive Stock Option Plans.* The Conference Board, Research Bulletin No. 148, 1983.

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Research Bulletin

The Economic Outlook, 1984

Summary of an Outlook Meeting of
The Conference Board Economic Forum

The Conference Board

number 151

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*Unable to attend meeting of November 10, 1983

Guests at the Forum, November 10, 1983

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Chief Economist
E.I. Du Pont de Nemours & Co., Inc.

FRANK W. SCHIFF
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Summary of The Conference Board Economic Forum

Albert T. Sommers

Meeting for its regular annual forecast of the economic outlook for the year ahead, The Conference Board Economic Forum has described 1984 as a year of broadly favorable economic development. As a group we look for steady, continuing growth—not at the record pace of recent quarters, but somewhat above a long-term norm. We see no onset of recession at any point in the year, and our view even of year-end does not suggest any ominous loss of vigor. The real growth rate should be about 5.4 percent, measured as calendar year 1984 over calendar 1983. (A little surprisingly, this outcome suggests a sustained growth rate of only 3.8 percent per annum from late 1983 to late 1984; this is a reflection of the fact that 1984 will start out at well above the average level of 1983.) We see only a very modest acceleration of inflation to about 4.8 percent from the level maintained this year.

The economy we foresee for 1984 marks a shift of gears from 1983. We see no local explosions—no virtuoso performances—in any particular sector, but instead a broadly distributed "expansion," as distinguished from the powerful but not fully coordinated "cyclical recovery" of 1983. Employment will, of course, continue to benefit from such growth, and unemployment will decline moderately (but not as rapidly as in recent months). While virtually all parts of the system participate, the eruptions of housing and inventory demand in 1983 will not recur, and the trade deficit will continue to widen. Private investment—most notably in equipment, but in some degree also in plant-building—will join in the expansion. These findings are held very nearly unanimously by the members of the Forum.

We are, nevertheless, uneasy about the policy conditions surrounding 1984. A year ago, in our forecast for 1983, fewer than half of us felt that the budget deficit visible for that year was too high, but we were unanimous in arguing that the deficits in later years clearly appeared to be too high. We come close to repeating that opinion again. It is not the 1984 budget deficit, but the deficits that lie beyond 1984 that we find disturbing. Similarly, we are uncomfortable, as we were last year, with the levels of nominal and real interest rates that prevail in late 1983. The visible trends of the system as we enter 1984 are simply too clear, too strong, and too free of problems logically traceable to the policy structure to give rise to much present concern among the members. But we appear not to have foresaken our position of last year, that the policy structure remains "lopsided"—fiscal policy too stimulative, monetary policy too restrictive—and that it will, in time, require important adjustment. At the end of 1984, according to our projection, economic recovery will still be far from complete, most particularly with respect to the unemployment rate. Further growth beyond 1984 will call for reduction in the deficit, and a considerable further reduction of real interest rates.

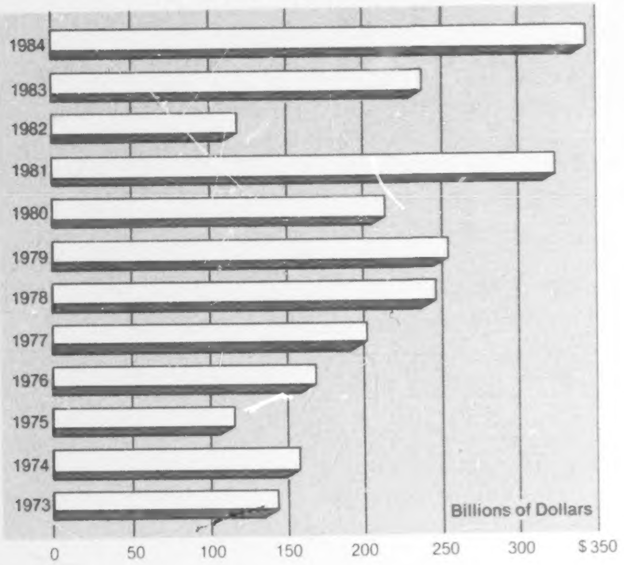
Albert T. Sommers
Senior Vice President and Chief Economist
The Conference Board

Outlook by Sectors

The participants who devoted themselves to the outlook for the general economy and its principal sectors in 1984 almost uniformly support a favorable description of the year ahead.

Our generalist, looking at all the influences at play on the national economy, describes the outlook as "almost too good to be possible." He expects a 5 percent increase in the real outlays of consumers for goods alone, and 4.3 percent for both goods and services. Capital spending in real terms will rise about 7 percent. Inventory building will continue, but at a less rapid rate; even housing starts will be up modestly. Total industrial output should be rising at a 9 percent rate in 1984 (less, of course, than the spectacular 15 percent growth of 1983), and profits should be up by over 30 percent. Total output of all goods and services in 1984, after adjustment for inflation, will be more than 5 percent above the 1983 level.

The Conference Board's Economic Forum met on November 10, 1983 for its year-end examination of business and economic conditions in the year ahead. In an effort to provide you with the highlights of this important session as promptly as possible, the Board has prepared this concise report on the Forum's findings, including the summary by Albert T. Sommers, the Board's Chief Economist and Chairman of the Forum, and selected quotations from each of the participants. Data for 1983 and 1984, appearing in the economic model and in the charts, reflect the collective judgment of the Forum, and are not necessarily identical with the views expressed by individual sector specialists.



Year-to-Year Dollar Changes in Nominal Gross National Product

Sources: U.S. Department of Commerce; The Conference Board Economic Forum (for years 1983 and 1984)

Our generalist attributes this unusual combination of broad recoveries in so many parts of the business system in part to an absence of the inflationary pressures that ordinarily arise in the presence of rapid growth. Stable or weak energy prices, further reductions in unit labor costs (themselves reflecting a decline in wage escalation in the presence of rapidly rising productivity), and the deflationary effect of a high valuation of the dollar will all conduce to a very satisfactory price performance.

Approaching the inflation potentials of 1984 from another direction, our specialist in wages, prices and costs confirms that favorable judgment of the inflation outlook. Underlying the cyclical surge of productivity gain in 1983, there appears to be a long-term reversal of the downtrend in U.S. productivity experience. The result will be an unemployment rate in 1984 (even in the presence of rapid growth) that will continue to restrain wage inflation. The resulting moderation in unit labor cost provides a basis for expectations of general price moderation throughout the year. Cyclical growth at the rate we seem to expect may imply some general acceleration of general price indexes, but far less than would be suggested by past experience with such vigorous growth. His estimate for the GNP implicit price index in 1984 is a rise of 3.5 to 4 percent; the consumer price index will rise a little more than 4 percent. All this in the presence of his own real-growth estimate of 6 percent, above the average of the group as a whole.

Our specialist in the consumer sector calls for continued vigorous growth in personal outlay in 1984, although not at the explosive rate reached in the Spring of 1983. The consumer debt burden is manageable; confidence is high; and expanding employment will feed the income stream. Real spending will rise by almost 4 percent—somewhat less than the rise in real disposable income, as the personal saving rate drifts up toward more normal levels. Following an exceptionally strong 1983 Christmas season, his forecast calls for moderate but sustained growth in this largest of all the components of the system.

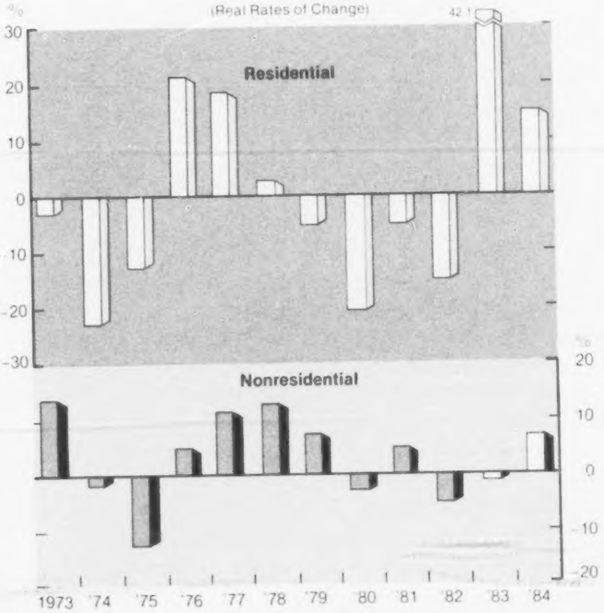
Our spokesman for the housing sector expects the housing market to give a good account of itself in 1984, even in the absence of any considerable decline in interest rates. The housing business is now very different, both on the building side and on the financing side. Mortgage-making institutions are much more able to bid for funds in the newly deregulated markets, and will remain active mortgage lenders. And the developing national market for mortgage-backed securities has desensitized the toughest risks confronted by mortgage lenders in the past. At the same time, the higher share of homebuilding attributable to large, well-financed builders, often with their own ties to financial institutions, argues for a well-sustained housing market. He expects starts in the neighborhood of 1.7 million, about the same as in 1983—a figure that would imply as much as a $20-billion addition to the dollar value of housing as it appears in the GNP. (Some portion of this rise will reflect the continuing growth of renovations and additions.) Apartment building will constitute a somewhat higher proportion of total residential construction in 1983, partly as a reflection of the new tax-depreciation provisions.

Our specialists in the important sector of business investment in plant and equipment produce a picture for 1984 of ongoing and accelerating recovery for the sector as a whole, but with growth unevenly distributed among its many subindustries. Investment in 1984 will seek cost control in a still highly competitive environment. Concerns over market share are stimulating cost-cutting investment, but interest in new "greenfield" investment for plant and traditional industrial machinery is still not visible. Nevertheless, utilization rates are rising, and cash flow is improving dramatically. The capital goods markets, taken as a whole, will contribute substantially to the 1984 recovery. The advance is already visible in ordering rates, particularly for vehicles and materials-handling equipment. A much slower turnaround, and probably nothing more than slow growth in 1984, is the outlook for construction machinery, agricultural machinery, and machine tools; all of these subindustries are still struggling with relatively high inventories, and some of them with intense import competition. Faced with the opportunities presented by a rapidly rising cash flow, businesspeople still remain tentative, fearing both rising cost pressures and degrees of monetary restraint which would elevate the cost of capital. They are seeking to avoid the excesses that typically develop in this area, and to avoid dependence on external capital in their financing plans. The capital goods outlook is slightly qualified by these considerations; nevertheless, the machinery and equipment industries, taken as a whole, will contribute substantially to aggregate growth in 1984, whereas they were a considerable drag on the growth rate of 1983. The comments of both specialists confirm the impression that industrial construction will be generally flat in the near term, as growth in commercial-type outlays is partly offset by continuing weakness in some areas of plant construction and in office-building.

Our discussions of the demand for inventory in 1984 yield still another generally positive conclusion. By all measures, the *level* of inventory is still low, relative to the size of the present markets for goods and the prospective growth we see ahead. Inventory demand will clearly make a positive contribution to the growth of output in 1984. On the other hand, a large part of the typical cyclical reversal from liquidation to accumulation has already occurred. In the third quarter, inventories in the nonfarm sector were growing at a $20-billion annual rate; this compares with a liquidation rate of roughly $50 billion a year ago. Further growth in inventory demand is in prospect; our discussion suggests accumulation in 1984 at a more or less sustained level of between $25 billion and $30 billion. Inventory demand is thus being converted from a powerful independent source of demand to a sustaining component of the outlook.

Fixed Investment

(Real Rates of Change)



Sources: U.S. Department of Commerce; The Conference Board Economic Forum (for years 1983 and 1984)

Our specialist in the area of government expects continuing expansion of Federal Government outlay in 1984. He doubts very much that any legislation significantly affecting either the prospective spending or the prospective revenues is likely before the election. (Legislation *after* the election may not even have an important effect on the behavior of the government sector in calendar 1985.) The spending side of the federal budget reflects a lag of approximately $5 billion behind the standard projections—a consequence of a slower gearing up of defense production and delivery than is implicit in the rate of authorizations. On the other hand, the operating outlays of the Defense Department have been at least modestly affected by the trend of increase in actual military activity. The expectations for nondefense spending are also close to conventional projections. The economies possible within the aggregate budget spending for current services are likely to be offset by moderate additions to programs that escape a presidential veto. At the time of our meeting, the prospects for legislation importantly altering spending and receipts—as envisioned, for example, in the Dole proposals—do not look bright. Our reflections on the budgetary position and the significance of the deficit are discussed below; for this sectoral purpose, aggregate federal outlays, as they appear in the national accounts, are likely to rise more or less steadily throughout the year, and rise about 11 percent above their level in calendar 1983. Similarly, expenditures of state and local governments are expected to rise by approximately 9 percent. This considerable acceleration from 1983 is already visible in recent data. The share of government in the total expenditures recorded in the gross national product is thus likely to be very little changed from its share in 1983.

Our consideration of the U.S. trade position gave weight to expectations of generally high U.S. interest rates, a continuing strong dollar, vigorous further advance in U.S. demand (far faster than the growth of our developed trading partners), and continued impairment of the import potentials of both oil-producing and non-oil producing LDC's. We expect further enhancement of the U.S. trade deficit in net exports to a level of over $40 billion for 1984 as a whole.

The Forecast Tabulated

In the traditional polling of Forum members prior to the beginning of the meeting, the 1984 outlook calls for a real growth rate of 5.4 percent—a reasonable average in that all of the responses fell in a range of 4.6 to 6 percent. (Understandably, the lowest entry for real GNP comes from our capital markets specialist, who expects relatively rapid inflation and a considerable rise in interest rates. The top of the range is represented by our specialist on costs and prices, and our monetarist, who see considerably less inflation than the Forum as a whole.)

RESULTS OF PRE-MEETING POLL*

THE FORUM CONSENSUS TABULATED:

	Actual 1982	Estimated 1983	Projected 1984	Rates of Change	
				1983/1982	1984/1983
Gross National Product (Billions of Dollars)	$3,073.0	$3,311.1	$3,654.7	+ 7.7%	+ 10.4%
Real Gross National Product (Billions of 1972 Dollars)	$1,485.4	$1,536.0	$1,618.2	+ 3.4	+ 5.4
Implicit Price Index (1972 = 100)	206.88	215.57	225.85	+ 4.2	+ 4.8
Consumer Price Index (1967 = 100)	289.1	298.4	313.1	+ 3.2	+ 4.9
Producer Price Index** (1967 = 100)	280.7	285.8	299.7	+ 1.8	+ 4.9
Unemployment Rate (% of Civilian Labor Force)	9.7%	9.6%	8.5%	—	—
Industrial Production Index (1967 = 100)	138.6	147.6	162.1	+ 6.5	+ 9.8
Corporate Profits Before Taxes, less IVA (Billions of Dollars)	$165.8	$200.9	$250.8	+ 21.2	+ 24.8

*This forecast incorporates submissions made by Forum participants on November 10, 1983, and is based on Department of Commerce data available at that time.

**Finished Goods.

The results of the poll for all of the three measures of price change show relatively narrow variation among the Forum members: There is a heavy concentration of response at the level of a 5-percent expected inflation rate for all three of the indexes. For the unemployment rate, the group anticipates an annual average of 8.5 percent, again with very little variation among the responses. The 8.5 percent rate for the year as a whole would presumably produce a rate still somewhat above 8 percent by the end of 1984. Our forecast for the industrial production index calls for an increase of almost 10 percent. This is considerably higher than the 6.5 percent annual increase of 1983, but the elevation of the 1984 forecast largely reflects the high starting level of the index at the beginning of 1984. We clearly do not expect to approach the 15 to 20 percent annual growth of industrial production of the past several quarters. For corporate profits before taxes (excluding inventory profit) we expect an increase of about 25 percent for the year as a whole; again, the level of this increase partly reflects the rapid rise of earnings within calendar 1983.

These are the results yielded by a poll taken prior to the meeting. In the course of the meeting, the Forum assembled a gross national product model by sector. The results of this collage of the individual opinions of sector specialists is generally consistent with the pre-meeting poll on the expected inflation rate. However, these estimates of real growth in the GNP model are significantly less than the expectations reported in the poll. This appears to be mainly a reflection of the substantial enlargement of the deficit in net exports proposed by our sector specialist in that area. Our limited discussion of this aspect of 1984 at the meeting clearly supports his pessimistic view (in fact, in late 1983 the ongoing deficit is apparently not much less than his expectation for calendar 1984).

The real growth in the sector account appears as 4.8 percent, as contrasted with an average of 5.4 percent in the aggregate expectations derived from the poll. In the one other direct comparison between the two sets of data that is possible—that is, with respect to corporate profits before tax, and before inventory profit—the sector account calls for an increase of over 30 percent, whereas the poll indicated about 25 percent. The difference is large, but our discussions made it quite clear that the substantial improvement in corporate profits that began in the Spring of 1983 will continue without interruption in 1984. The unemployment rate appearing in the sector account is very nearly identical with the expectations recorded in the pre-meeting poll.

The GNP forecast reveals a continuation of strength in the cyclical sectors of the economy—in personal outlays for durable goods (a 14 percent increase); in nonresidential fixed investment (about 10 percent, which will require acceleration during the year); and in a high and sustained rate of inventory accumulation. It expects continued growth in national defense outlay, at almost a 13 percent annual rate, and a reversal into growth in the dollar nondefense outlays of the Federal Government. For all the other sectors except net exports, the behavior described in the GNP model appears to be conventional performance for a business cycle that is no longer young, but is not yet beset with excesses, and that is characterized by still relatively high unemployment, and a still relatively low rate of ongoing inflation. After its rapid change in 1983, the composition of personal outlay more or less stabilizes; within the investment sectors, the pronounced decline in the growth of residential activity is offset by the recovery in plant and equipment investment, and in sustained inventory demand. On the income side of the forecast, the increases in personal income and disposable personal income are considerably greater in 1984 than in 1983, but this acceleration is partly offset by a modest rise in the personal saving rate. Within the corporate sector, the high rate of growth of profits before taxes and after taxes yields an enormous acceleration in the rate of retained earnings—a condition described by the Forum as the main contributor to the recovery of plant and equipment outlay.

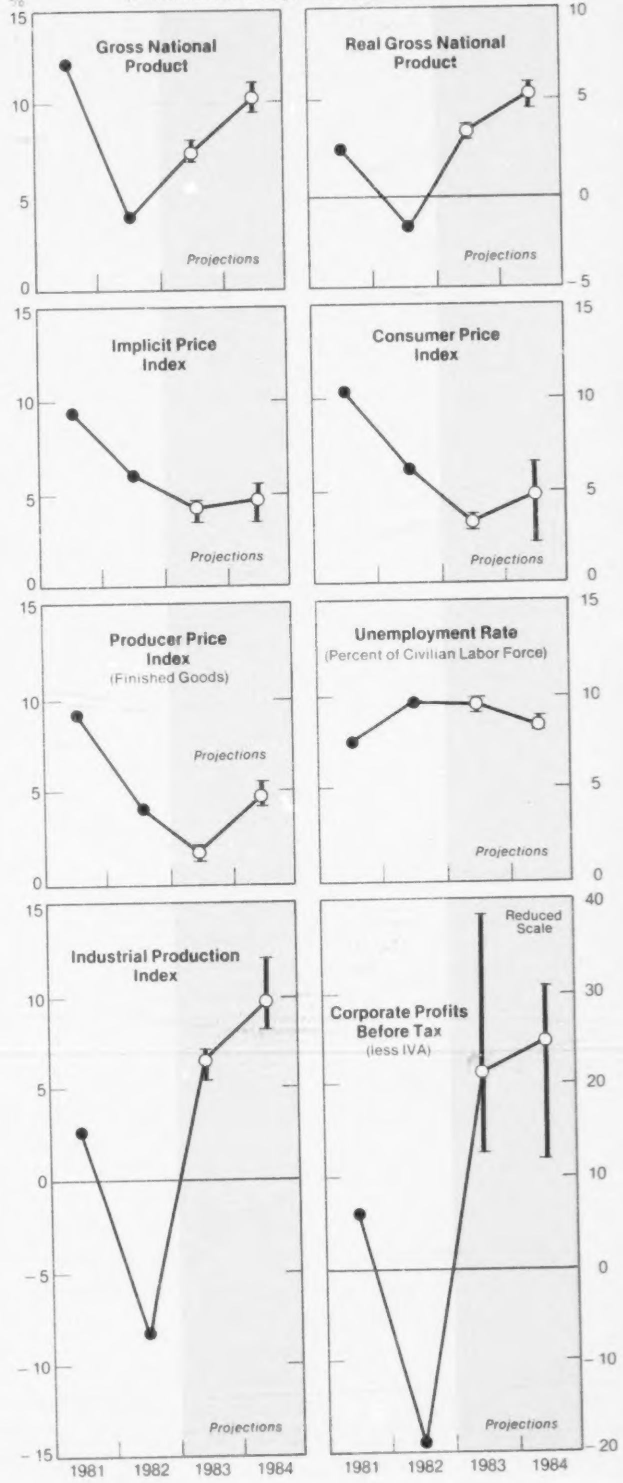
Economic Policy in 1984

The real concerns expressed by the Economic Forum involve policy, not the ordinary problems of business-cycle forecasting. Not one member of the Forum expects the expansion, so visible in the last half of 1983, to disappear at any point in 1984. The word "recession" was hardly mentioned in the course of our discussions. The growth rate will subside from the hectic, juvenile pace of an early recovery phase, but will remain substantial and broadly based throughout 1984. There was not even a clear suggestion that the growth rate will be any slower in the last half of 1984 than in the first half; a considerable majority expects growth to be well-maintained, without any big inflection point, throughout the year.

Nevertheless, the implied quarter-by-quarter growth rate in our average forecast for 1984, hints of limits to

Results of the Pre-Meeting Poll

(Annual Rates of Change, Except Where Noted)



Note: Years 1983 and 1984 are based on projections made by the Economic Forum panel; bars show highs, lows, and averages.

Sources: U.S. Department of Commerce; The Conference Baord Economic Forum.

Table 1: GNP Model by Sector, 1982-1984
(Billions of Dollars)

					Percent Changes	
		1982	*1983*	*1984*	*1983/1982*	*1984/1983*
1	GROSS NATIONAL PRODUCT	$3,073.0	$3,310.4	$3,631.7	+ 7.7%	+ 9.7%
2	Personal Consumption Expenditures	1,991.9	2,160.3	2,353.7	+ 8.5	+ 9.0
3	Durables	244.5	278.3	318.4	+13.8	+14.4
4	Nondurables	761.0	807.1	867.1	+ 6.1	+ 7.4
5	Services	986.4	1,074.9	1,168.2	+ 9.0	+ 8.7
6	Gross Private Domestic Investment	414.5	469.6	560.6	+13.3	+19.4
7	Residential	90.8	131.1	153.5	+44.4	+17.1
8	Nonresidential	348.3	343.0	376.8	- 1.5	+ 9.9
9	Change in Business Inventories	-24.5	- 4.5	30.3	....	....
10	Net Exports of Goods and Services	17.4	-12.9	-42.5	....	....
11	Government Purchases of Goods and Services	649.2	693.4	759.9	+ 6.8	+ 9.6
12	Federal	258.7	277.6	307.5	+ 7.3	+10.8
13	National Defense	179.4	203.0	228.8	+13.2	+12.7
14	Nondefense	79.3	74.6	78.8	- 5.9	+ 5.6
14	State and Local	390.5	415.9	452.3	+ 6.5	+ 8.8
16	PERSONAL INCOME	2,578.6	2,742.5	2,993.1	+ 6.4	+ 9.1
17	Personal Tax and Nontax Payments	402.1	406.1	442.3	+ 1.0	+ 8.9
18	Disposable Personal Income	2,176.5	2,336.4	2,550.8	+ 7.3	+ 9.2
19	Interest and Transfers	59.2	63.1	66.6	+ 6.6	+ 5.5
20	Personal Saving	125.4	112.9	130.6	- 10.0	+15.7
21	Saving Rate (%)	5.8%	4.8%	5.1%	....	....
22	CORPORATE PROFITS BEFORE TAX	174.2	207.2	275.2	+18.9	+32.8
23	Inventory Profit	8.4	10.6	15.0	....	....
24	Capital Consumption Adjustment	1.1	-29.7	-50.5	....	....
25	Profits from Current Production	164.7	226.3	310.7	+37.4	+37.3
26	Corporate Tax Liability	59.2	76.5	101.2	+29.2	+32.3
27	Corporate Profits After Tax	115.1	130.7	174.0	+13.6	+33.1
28	Dividend Payments	68.7	73.9	88.7	+ 7.6	+20.0
29	Retained Earnings	46.4	56.8	85.3	+22.4	+50.2
30	PHYSICAL OUTPUT (GNP in 1972 $; SAAR)	$1,485.4	$1,534.8	$1,607.8	+ 3.3	+ 4.8
31	GENERAL PRICE INDEX (1972 = 100; SA)	206.83	215.69	225.88	+ 4.3	+ 4.7
32	UNEMPLOYMENT RATE (%; SA)	9.5%	9.8%	8.6%	....	....

Note: Components may not add to totals, owing to rounding.

Sources: U.S. Department of Commerce; projections for 1983 and 1984 by Forum participants, with some Conference Board interpolations.

growth that were not present in 1983. The concerns of the Forum are plainly over the state of economic policy—the condition of the budget, the challenge it poses for the Federal Reserve, and the condition of credit markets and interest rates.

The positions of individual members of the Forum with respect to the economic performance of 1984 are correlated with their views on the development of policy. At one extreme, our specialist for the bond and stock markets appraises the 1983 recovery as "above average," and looks for still powerful increases in aggregate demand in the current quarter. The capital market outlook is "deteriorating," in part because the capital requirements implied by rapid growth in the private sector and a continuing very large budget deficit will produce significantly rising interest rates in the year ahead. The capital market is assuming that something will be done to avert this collision. If nothing is done, and he expects nothing to be done, a "surprise" is in store, in the shape of interest rates that will suppress activity, and qualify the outlook for stock prices. The budget deficit will not be dealt with until a "crisis." This is the stuff of which higher interest rates are made, and the rate prospects are augmented by a number of conditions created by deregulation of financial markets.

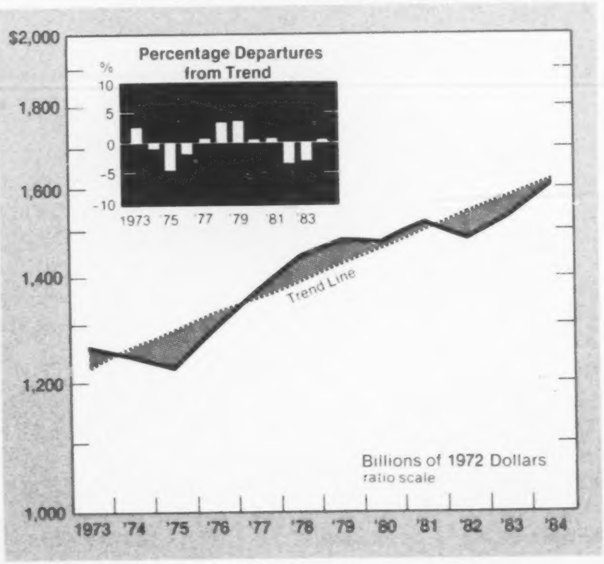
Our specialist on the monetary outlook and monetary policy takes a much more moderate view of the credit dilemma. He finds the Federal Reserve to be in an excellent position to stabilize the short-term interest rates under its immediate control. The monetary aggregates have behaved; price indexes are still exhibiting minimal inflation; and the pace of real recovery is subsiding toward normal. Moreover, the "crowding-out," implicit in the description by our capital-markets spokesman, and even the fears of future inflation so widely discussed in financial markets, are already included in interest rates and in the shape of the yield curve. Real interest rates are, in fact, still high enough to impede demand for inventory, housing, and even the credit-related portions of personal spending. Given the neutral position of the money aggregates, the Federal Reserve will be inclined to engage in traditional "leaning against the wind"—to cushion and adapt, rather than to enforce, independent changes in the money markets and the interest rates they produce. He considers the principal reason for high real interest rates in the system to be relatively restrictive Federal Reserve policy in 1983. Evidence that inflation is under reasonable control, and evidence that the cyclical energy in private business is subsiding, should gradually lead to less restrictive policy, and hopefully, in his view, considerably lower interest rates by the end of 1984.

The dispersion of our views on monetary outcomes and interest rate outcomes in 1984 is related to the dispersion of our views on the probable course of the budget deficit, and the significance of the deficit and its implied financing requirements for capital markets and interest rates. In general, the Forum takes a serious view of the deficit prospects described to us by our specialist on the government sector and the federal budget. He expects no real achievements in budgetary control in 1984. Indeed, he expects the deficits to stay at a level close to $200 billion for the next several years. Prospects are not bright for recent efforts to achieve major tax reduction and spending reduction. What achievement there has been on the spending side reflects in part a shortfall of defense outlay behind the authorization rate. He expects that to continue, although it will be offset by increased operating outlays. Other members point out that the defense buildup is probably bigger than it looks; that it will not be cut; and that substantial acceleration in defense production appears to lie ahead for the next several years. Only a very few of the Forum participants believe that the rapid growth being experienced as we met will importantly alter the deficit trajectory described by our specialist. Every member of the Forum subscribes to the distinction between a "cyclical" component of the deficit and a "secular," or "structural," component of the deficit. And several members argue that the structural deficit will be widening over the next few years even as growth continues: The stimulus from the deficit actually rises as the system consumes its margin of idle resources.

The Forum makes no argument for rigid adherence to a balanced federal budget. About half the members would accept an ongoing deficit of as much as 2 percent of GNP, which would now translate into about a $70 billion annual deficit. About a third of the Forum would accept a condition in which the aggregate debt outstanding maintains a constant relationship to GNP. Such a guidance rule would produce a deficit of nearly $100 billion in 1984, assuming an 8 percent rate of growth in nominal GNP. The projected deficits are, thus, more than double what a large majority of the Forum would treat as tolerable. About half of the Forum would argue for reduction of the structural deficit in 1984; virtually all of the remainder would argue for reduction in later years. Three-quarters of the members see the ongoing deficit as a cause for expecting both more inflation and higher interest rates in 1984; and a majority appear to expect further serious consequences in 1985.

The views of the Forum with respect to the budgetary

Real Gross National Product



Note: Trend line 1973 to 1982
Sources: U.S. Department of Commerce; The Conference Board Economic Forum (for years 1983 and 1984)

and monetary dilemmas of 1984 clearly focus on the budget, and appear to treat monetary policy as having coped reasonably well with the burdens imposed by the deficit. Two-thirds of the Forum believes monetary policy has been about right in the last half of 1983 (most of the remainder consider it to have been too restrictive).

Almost half of the Forum considers that the budget deficit is the predominant reason for the high real interest rates prevailing as 1984 begins, and, somewhat surprisingly, more than half expect long-term interest rates at the end of 1984 to be higher than they are now. Half of the Forum considers that the next slowing of the U.S. expansion will be attributable to interest rates; some others believe that the next cyclical peak will simply be a reflection of ordinary cyclical experience; still others (almost a third) expect that the valuation of the U.S. dollar in international markets, and the trade deficit to which it contributes, will play a substantial role in terminating the expansion. Despite his generally favorable view of prospects for the equity market, our spokesman in that area suggests that even with continuing recovery in 1984, accompanied by generally favorable earnings performance, both the equity market and the economy itself will require a decline in interest rates to sustain performance through the year ahead.

Our international specialist adds a further dimension to these concerns. International lending practices of the past decade have built a heavy structure of debt among the non-oil producing LDC's to levels probably 20 percent greater than they can hope to support under current conditions in their trade balances. Both lower borrowing on their part, and a substantial, sustained increase in their exports to the developed economies will be required to restore order in this sector. He considers this to be achievable over the next two or three years, but the improvement depends upon vigorous growth in the West to absorb the implicit high imports. He appears to expect such growth, but the Forum as a group is less confident of the general outlook, particularly, perhaps, for Europe.

It is obvious that this meeting of the Forum is more than usually difficult to summarize, mainly because a very powerful cyclical expansion, whose opportunities are still far from consumed, coexists with a set of policy variables that are disturbing to a majority of the members, and highly cautionary to some. A majority of the Forum seems to accept a genuine threat that the prospective budget deficit will interact with the ultimate credit demands of a vigorous private economy in ways that will warrant the term "crowding-out." Our specialist in capital markets even seems to feel that the crowding-out will be accompanied by more severe rate behavior than in the past. Private deposits are now held primarily on floating rates; and the financial institutions holding the deposits will compete to keep the money, even in the face of mounting Treasury demands. The Treasury will have to buy the money from a reluctant financial sector, with more than the usual rate consequences. There is also a general opinion prevailing among the Forum members that the prospective levels of interest rates will in the end shape a "lopsided" recovery—lopsided in the sense that it will be associated with impairment to the housing market and the rate of private investment, and it will impose heavy constraints on those industries that are exposed to international competition at home and abroad.

But a large majority of the Forum does not appear to consider that these issues will reach critical dimensions within 1984. Our collective forecast carries signs of these developing problems—most particularly in the expected size of the trade deficit—but we believe that such restraints will be substantially outweighed by the continuing general strength of the system. It is the end of 1984, or 1985, or, in the views of a few members, even 1986, before the budgetary and monetary anomalies that are clearly present even now will come to outweigh the cyclical momentum that is present as we meet, and that we expect to continue so far into 1984 as to color our impression of the entire year. In a word, the Forum explicitly recognizes the quandaries resulting from substantial tax reduction; escalations of defense requirements; low probabilities that the defense surge can be offset by substantial curtailments in the rest of the budget and, hence, a seriously swollen budgetary deficit that will, in the end, plague a Federal Reserve that is struggling to maintain private growth while resisting inflation. A majority expects that a price will eventually have to be paid if the policy contradictions are not resolved; but the price and the payment apparently lie beyond 1984.

Our resident sociologist provides a suggestive closing note for the summary of the Forum's 1984 outlook meeting. In the early 1980's, a long deterioration in American attitudes toward U.S. institutions—the government, the family, even churches—has reversed into improvement. The "alienation" so characteristic of the 1970's is subsiding. He attributes the onset of recovery in "gross national spirit" in part to the Administration's own performance, and in part to the recent rapid improvement in general economic conditions. Our forecast for 1984 suggests an economic environment in which personal satisfaction with national economic conditions can continue to rise. But the improvement is still brief and fragile. Sustaining a sense of coherence in U.S. economic policy beyond 1984 would appear to be important for more than just economic reasons.

Business Outlook: 1984 Should be an Unusually Good Year

Charles B. Reeder

A brief review of the outlook for various aspects of the U.S. economy in 1984 leads to the inescapable conclusion that the year ahead should be an excellent one—for consumers, for business, and also for the government.

- Total employment should rise by over 3 million to a new all-time peak, and unemployment should decline another million during 1984.
- Total retail sales should rise another 5 percent in real terms, with new car sales up 15 percent.
- Industrial production should continue rising all year and register an annual gain of 8 to 10 percent.
- Corporate profits should increase by more than 30 percent.
- The rate of inflation should remain low in 1984, with the CPI rising 4 to 5 percent over 1983.
- Interest rates should decline one to three percentage points from present levels.
- The federal deficit should shrink by at least $30 billion from 1983's record of $195 billion.

Such a buoyant outlook appears almost too good to be possible—especially the prospects for low inflation and declining interest rates. How can this take place if the economy grows strongly for a second consecutive year?

Clearly there has to be something different about this recovery from other recoveries if all of these good things are to happen. That "something different" in the inflation picture involves: stable to weak energy prices as a result of a continuing excess worldwide supply of oil in relation to demand; sharply lower unit labor costs as a consequence of the unprecedented decline in the rate of wage escalation, combined with surging productivity growth; the deflationary effect of an overvalued dollar; and sharply lower rates of increase in housing costs.

These factors should more than offset any upward pressure on the price level from the accelerated rise in the money supply between mid-1982 and mid-1983, and also the rebound in some industrial commodity prices over the past several months. The latter has been a normal response in the early stages of recovery where price had been driven to unrealistically low levels in the recession.

The initial effects of the faster rise in the money supply last year were lower interest rates and the beginning of real economic recovery, not accelerating inflation. The rate of growth in the money supply is currently slowing, so that even this potential source of higher inflation may no longer exist.

Charles B. Reeder
Chief Economist
E.I. Du Pont de Nemours & Co., Inc.

The "something different" affecting interest rates comprises their already very high absolute level; the prospect of reduced public and some private credit demands in 1984; and the indirect pressures imposed on U.S. monetary policy by the international debt situation.

Interest rates have fallen significantly from their peaks in 1981, but they are still extraordinarily high in relation to actual inflation, and to inflation prospects. The current spread between the prime rate and the inflation rate is 8 percentage points, more than triple the historic spread. Thus, even though rates are down from recent peaks, there is ample room for them to decline further.

The U.S. Treasury has substantially reduced its estimate of the size of the federal deficit for 1984, and further reductions are likely as the recovery becomes stronger. Revenues are rising rapidly, and lower inflation is having a dampening effect on outlays. To the extent that the federal deficit has contributed to the current level of interest rates, a smaller deficit next year should lead to lower rates.

In the private sector, consumer and mortgage debt probably will rise in 1984, but business borrowing should be lower. Corporate internal cash flow is soaring and should outstrip the prospective rise in capital expenditures next year. Moreover, corporations have increasingly been raising funds with equity issues rather than debt instruments.

The debt-servicing problems of Third World nations will persist for many years. The best way to help these countries is for the present recovery in the industrialized world to continue and for interest rates to decline. It is reasonable to assume that the Fed will not tighten credit and raise interest rates in 1984. Any tightening of credit by the Federal Reserve would restrict recovery in the industrial countries, intensifying the already serious problems of debt-burdened developing nations, not to mention the problems of banks with loans to these countries.

Thus, all of the elements are present to make 1984 an unusually good year. Low inflation and declining interest rates may not be typical in the second year of recovery from a recession, but the 1981-1982 recession was not typical, and government fiscal and monetary policies preceding the recovery were not typical.

Wages, Prices, and Productivity

Barry Bosworth

Barry Bosworth
Senior Fellow
The Brookings Institution

The rapid decline in the unemployment rate from 10.7 percent in December, 1982, to 8.7 percent in October, 1983, is one of the most striking features of the current economic recovery. It stands in sharp contrast to earlier discussions of a modest economic expansion, and it implies cyclical job gains larger than in prior recoveries. In contrast, the latest data on output per manhour indicate an unusually strong cyclical gain in labor productivity. That implies that workers are being rehired at a slow pace relative to the gains in output. The explanation for this apparent conflict lies with a large discrepancy in the estimates of employment gains from two surveys. The survey of households, which produces the estimate of the unemployment rate, reported a gain in nonfarm wage and salary employment of 2.4 million between May and September. The survey of business establishments, on the other hand, estimated the increase at only 1.3 million.

That discrepancy did narrow during the month of October, when the establishment survey showed a gain of 300,000 jobs compared to a decline of 150,000 in the household survey. However, because the household survey also reported a 550,000 decline in the number of individuals looking for work, there continues to be substantial uncertainty about the meaning of the employment numbers.

Normally, the establishment estimate of employment changes is believed to be the more reliable number; but, because differences in the employment count between the two surveys are highly correlated with variations in the labor force, there is no particular pattern of error in the estimate of the unemployment rates. The 1983 employment discrepancy, however, is not completely offset by larger-than-normal increases in the labor force, and, together with the large October decline in the labor force, it suggests that the current unemployment rate estimate is abnormally low by about 0.5 percentage points. This factor, together with moderation of the overall expansion in the second year of recovery, leads me to expect very modest further declines in unemployment during 1984.

If the establishment estimate of employment is judged to be the more reasonable, the improvement in labor productivity is more than would be expected from purely cyclical factors. That is encouraging in suggesting at least a partial turnaround in the deterioration of productivity growth that occurred during the 1970's. That improvement seems most evident in the manufacturing sector.

On the inflation side, a continuation of unemployment above 8 percent throughout 1984 argues against any significant acceleration of wage inflation. Hourly earnings have been rising at about 4 to 5 percent annually, and total labor compensation at about 5 to 5.5 percent. Despite all the emphasis on concessionary labor negotiations, union increases continue to exceed those of nonunion workers by about 1 percentage point, but nearly all that difference is accounted for by the greater importance of fringe benefits (pensions and medical insurance) in the union agreements.

Overall, inflation should accelerate some simply because past highly favorable factors, such as falling energy and agricultural prices and a rising U.S. dollar exchange rate, could not continue indefinitely. Still, the moderate increases in unit labor costs provide a solid basis for a very good outlook for price inflation. The United States is emerging from the 1980-1982 recession with an underlying inflation rate about 2 percentage points below that of the 1975 recession, and unemployment will remain substantially higher than at comparable stages of the 1976-1979 recovery.

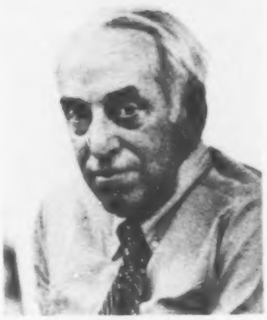
The Monetary Outlook

James Tobin

"Steady as you go" seems the likely course of monetary policy for the next several months. The Federal Reserve is in an excellent position to hold quite stable the short-term nominal interest rates under its immediate control. The monetary aggregates are well inside their targets. Prices are still well-behaved. The pace of real recovery is moderating. Moderate tightening over the last two or three quarters of 1984 seems likely on the basis of consensus economic forecasts, but Fed policy will be sensitive to price, employment, output, and exchange-rate developments.

Fed policies regarding short-term interest rates will be the main determinants of long-term rates. Expectations and fears of future inflation and/or "crowding-out" are already in the term premiums, and there is little on the horizon to change them.

A case for a more expansionary policy would be based on the perception that continuation of the recovery now depends on domestic investment. The initial brisk recovery was fueled by the shift from inventory liquidation to re-stocking, by housing construction, and by personal consumption. The latter two sources benefited from the backlog of demands for housing and durable goods, partially released by the interest-rate reductions a year ago and by improvements in actual and expected consumer wealth and disposable incomes. Real interest rates are still high, an obstacle to further improvement in these categories of demand. Fixed nonresidential investment is just beginning to improve, and it remains to be seen whether—given the cost of capital and the remaining excess capacity—it can now be the active agent of expansion. The trade balance deficit is a drag on the recovery, one that will get worse unless the dollar depreciates. For this reason, the Fed would certainly prefer to reduce rather than increase the differential of our interest rates above foreign rates.



James Tobin
Sterling Professor of Economics
Yale University

A case for a less expansionary policy would be based on the fear of a revival of inflationary pressures—a fear that gains weight the longer the recovery continues. Caution will be the greater as the inevitable increases in cyclically sensitive commodity prices enter monthly statistics of "inflation."

"Leaning against the wind" is a time-honored central bank strategy, quite open to the Fed when its M-targets are not binding in either direction. In addition, interest-rate increases are a way to press Congress and the Administration to correct the structural budget deficit. It is still desirable to alter the future mix of monetary and fiscal policy in the United States—a change requiring the cooperation of both sets of policymakers. But the prospects look dim until after November.

Capital Markets

Daniel S. Ahearn

The capital market outlook is deteriorating, following a year of substantial rise in stock and bond markets. The outlook has deteriorated because the markets' earlier record gains discounted most of the "good news" that still lies ahead, and also because the "good news" (on real economic growth, interest rates, inflation, monetary and fiscal policies, the impact of international debt problems on the world's financial institutions) will be less "good" in the year ahead than it was in the past year.

Optimistic views of the capital market outlook typically rely on an expectation of a protracted period of subdued economic activity, secular disinflation, and a long period of much lower interest rates to produce another major rise in the stock and bond markets.

The unfolding evidence is not supporting this outlook. The economic recovery, which was initially expected to be weak, was first transformed into an "average" recovery and is becoming "above average." While many still count on a slow economy in the fourth quarter of 1983, reacceleration in September and October suggests another bigger-than-expected real GNP quarter, that could rival the third quarter's 7.9 percent rise (which itself may well be revised upward). Indeed, the big improvement in consumer buying attitudes and the earlier-than-expected strength in the capital equipment market, hint that the economy may remain stronger than expected throughout 1984. This possibility would strengthen if prices rise to the point where consumers and businesses feel impelled to buy ahead.

Daniel S. Ahearn
Partner
Thorndike, Doran, Paine
and Lewis

Concern about inflation is not significant currently, but 1984 may test those who foresee secular disinflation or, at worst, years of subdued 4 to 5 percent inflation. Inflation bottomed in the first quarter of 1983 and, though still at low levels, has been trending up at a 5 percent rate since then; the uptrend should continue in 1984. The lagged effect of this Summer's drought will put upward pressure on food prices. Higher levels of economic activity should strengthen commodity prices and make it easier for business to secure price increases and for labor to defend its wages more effectively. Productivity gains are normally slow in the second year of recovery. A very strong dollar has been a potent anti-inflationary force for two years, but the dollar is now vulnerable. Thus, dollar weakness in 1984 may well add to inflation pressures.

None of this means that a return to double-digit inflation is imminent, but an uptrend in inflation will be a disturbing change from the 1981-1983 downtrend. It is likely to cause uncertainty as to where inflation will stop. Once such questioning begins, the ongoing massive federal budget deficits and the historically high backlog of money and credit growth will be discouraging omens for the future inflation prospect.

That interest rates reflect much more than inflation was illustrated anew in 1983. Interest rates declined less than inflation did in the first half of 1983—and then rose significantly. The strengthening economy disappointed hopes of still further easing in Federal Reserve monetary policy. The surge in the economy coupled with acceleration in consumer and mortgage borrowing reminded market participants that, in time, resurgent private borrowing was likely to compete vigorously with heavy Treasury financing needs. The first signs of increase in business financing requirements are becoming visible, and should become more so in 1984 as inventories are rebuilt and capital expenditure needs rise. Meanwhile, both the President and the Congress appear to be counting on economic recovery, not courageous political actions, to reduce the record budget deficits. Unfortunately the structural nature of those deficits means that cyclical recovery will help only briefly and not enough. Thus, it is only a matter of time until significantly higher interest rates will be needed to allocate the available supply of funds among borrowers.

Some in the capital markets count on the Federal Reserve to hold short-term rates down in an election year. This would require adding excessively to the already high year-to-year increment of bank reserve funds and seems unlikely. While there is much dispute about how much of the massive growth in the monetary aggregates is "real money," Federal Reserve officials are aware that the economy has responded as though much of the monetary growth is "real," and they remember the inflationary and interest-rate consequences of past episodes of excessive monetary stimulation. This time, the outlook for years of very large structural budget deficits increases the risks.

The deregulation of interest rates is adding upward pressure on interest rates. In particular, the creation of hundreds of billions of new floating-rate money-market deposit accounts means that the deposit bases of thrifts and commercial banks will no longer be available to be competed away by the U.S. Treasury, holding down Treasury bill rates in the process. Instead, the banks will raise deposit rates to retain their funds, and upward interest rate volatility will increase.

Thus, interest rates are projected to rise 100 to 200 basis points (or more) in an irregular uptrend, interrupted by recurrent sinking spells, until they hamper the recovery late in 1984 or in 1985. Equities will be affected by this heightened interest-rate competition, and are unlikely to provide more than a small fraction of the 60 percent plus return they provided in the past year.

The Government Sector

Frank W. Schiff

Frank W. Schiff
Vice President and
Chief Economist
Committee for Economic
Development

When Congress passed its First Budget Resolution last June, the belief was widespread that failure to carry out the Resolution's instructions to reduce the deficit to about $130 billion by fiscal year 1986 would almost immediately have highly adverse effects on financial markets and be likely to abort the recovery. It is now November and the new fiscal year has started. Yet Congress has thus far not been able to agree on reconciliation legislation that would come close to meeting the overall deficit reduction required under the Resolution. While its actions on the spending side have been closely in line with the Resolution's targets, no way has yet been

Table 2: Major Components of Budget Outlays as a Percent of Gross National Product

							Estimated			
Fiscal Years	*1972*	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1988*
National Defense	6.79%	5.03%	4.99%	5.28%	5.56%	6.18%	6.67%	6.98%	7.44%	7.82%
Net Interest	1.37	1.69	1.81	2.04	2.39	2.79	2.74	2.91	2.97	2.76
Social Security and Railroad Retirement	3.67	4.59	4.53	4.73	5.00	5.26	5.44	5.19	5.06	4.84
Medicare[1]	0.66	1.09	1.12	1.25	1.36	1.54	1.66	1.70	1.76	1.87
All Other Budget Outlays										
Payments for Individuals	3.59	4.07	3.89	4.44	4.55	4.57	4.86	4.20	3.96	3.41
Grants-in-Aid[2]	1.77	2.48	2.29	2.22	1.91	1.56	1.54	1.47	1.34	1.05
Other	2.60	2.48	2.20	2.45	2.11	2.11	2.25	1.56	1.39	1.09
Total, All Other	7.96	9.03	8.38	9.11	8.57	8.24	8.64	7.23	6.68	5.55
Total Budget	20.45	21.43	20.83	22.40	22.88	24.02	25.17	24.02	23.92	22.83
Off-Budget	—	0.50	0.53	0.55	0.73	0.57	0.52	0.41	0.27	0.18
Total Budget and Off-Budget	20.45	21.93	21.36	22.95	22.61	24.59	25.69	24.43	24.19	23.01

[1] Includes premiums and collections.

[2] Includes grants-in-aids that are payments for individuals.

Sources: Office of Management and Budget (*Budget of U.S. Government, Fiscal Year 1984*, and April, 1983 update for basic data); Committee for Economic Development, *Strengthening the Federal Budget Process: A Requirement for Effective Fiscal Control*, 1983, p. 11.

found to meet the requirement for increasing tax revenues by $73 billion over the next three years.

The most likely current prospect is that no major additional action will be taken and that the deficit, which came to $195 billion in fiscal 1983, will continue to stay in the $190-$200 billion range through fiscal 1986. Moreover, the structural component of the deficit will be rising progressively as a share of the total deficit over these years, producing the perverse result that fiscal stimulus will be increasing as the economy moves toward higher levels of capacity utilization and employment.

The lack of action on the budget deficit to date has been strongly influenced by the strength of the economic recovery, and the fact that most current forecasts envisage a continuation of relatively vigorous economic growth for another year or two while the size of the deficit remains unchanged. But the realization is now growing that although large prospective deficits may not produce imminent disaster, they are likely to contribute to a very lopsided recovery and less capability for real growth over the longer run. By placing upward pressures on interest rates (and, indirectly, on the dollar exchange rate), they will have increasingly adverse effects on the interest-sensitive sectors of the economy and on industries exposed to international competition.

Partly in response to such concerns, the Senate Finance Committee, under the leadership of Senator Dole, is currently attempting to devise a legislative package that would reduce the cumulative deficit for fiscal years 1984 through 1986 by $150 billion, with half of the reduction stemming from expenditure cuts and half from revenue increases. While the Committee's approach would apparently involve added savings from discretionary nondefense programs, it recognizes that the potential for such savings is limited (defense, entitlements, and net interest, currently constitute about 85 percent of total budget outlays); and assumes a major reduction in the deficit is likely to require budget savings from non-means-tested entitlement programs, as well as tax increases. A key feature of the proposed approach would be the coupling of a reduction in Social Security cost-of-living adjustments by 2 to 3 percentage points with an equivalent reduction in tax indexing.

Although the Finance Committee's effort has attained greater momentum than most observers had expected, chances do not appear bright for adoption of a major deficit-reducing package in the immediate future, particularly since the President has declared his firm opposition to the reported tax-increase proposals. Since agreement on a meaningful deficit-reduction package may become even more difficult in 1984, a number of proposals have been made to entrust the design of such a package to a public-private commission that would make its report after the election.

Deferring action on the deficit until early 1985, however, would entail major risks. Even if agreement could then be reached, there would be a considerable time lag until the deficit-reduction measures could take effect. If a weakening of the expansion were in prospect by that time, the chances for reaching an agreement might also be poor. In addition, delay in acting on the deficit will have continuous adverse consequences, including significant increases in the burden of interest payments on the federal debt. Such payments currently amount to over $100 billion a year.

Against this background, renewed efforts for meaningful action on the deficit may well emerge in the early part of 1984. The prospects are not promising that these will result in really significant action, unless heightened public awareness of the risks of inaction or an actual upsurge in interest rates produce strong political pressures on both the President and the congressional leadership for an agreement.

The International Outlook

George M. von Furstenberg

During the period 1979 to 1981, non-oil developing countries (but including Mexico) managed to raise both their imports and their external debt by around 40 percent in real terms. It is amazing that it took international lenders and borrowers three years to recognize that such profligacy could not last.

Nevertheless, in international economics, punishment tends to fit the crime eventually, and little is forgiven even developing countries. Hence, for them there may be three lean years, 1983 to 1985, following the three fat years, 1979 to 1981, that ended in confusion in 1982. The total stock of external debt (including debt to non-bank holders) of non-oil developing countries is now perhaps 15 percent—or about $100 billion—higher than what it should be. Two more years in which this debt grows 5 or 6 percent on average, while the dollar value of exports increases 12 to 14 percent per annum, would be about sufficient to bring external debt back into balance with these countries' growing export trade. In 1984 and 1985, non-oil developing countries as a group will, therefore, have to pay about half of the nominal interest on their debt through austerity if the present crisis is to be substantially resolved.

Particularly in Eastern Europe, there are countries whose external debt should not grow—even in nominal terms—for some time. In a few others, particularly in Asia, such debt, like their output, may increase faster than the average as long as it grows 6 to 9 percent less than the dollar value of their exports. Austerity can work in the developing world as a whole because an end to it is now in sight.

The United States and other industrial countries have engaged in monetary and fiscal stimulation to a degree that easily overpowers the effects of tight import restraints with which developing countries must live for a while longer. The U.S. deficit alone will be $80 to $100 billion larger in the next two years combined than one would normally expect in expansion. Hence there is no global macroeconomic inconsistency in advising non-oil developing countries at this time to export more and borrow less: The world recovery will proceed anyway.

George M. von Furstenberg
Rudy Professor of Economics
Indiana University

Difficulties will grow in other countries as the configuration of problems shifts. By 1986, developing countries will have benefited greatly from cyclical improvements in their terms of trade. They may again be increasing their net external debt by $100 billion or more annually; double-digit inflation may well have returned to the United States; and the memory of an overvalued dollar will be fading fast.

The practice of political economy does not aim so much at solving problems as at transforming them into different problems, hoping that the entire problem chain remains manageable. We should not be surprised, therefore, if the roller coaster will plunge past the recent deflation in traded goods prices to deceptively good times, before stalling on stagflation at the end of the present turn.

The Social Situation

Amitai Etzioni

Parallel to recent improvements in the economy, alienation has subsided. For instance, a sociological measurement called the "gross national spirit (GNS)" recently stood at 1246, 15 percent higher than in June, 1981, reflecting an improvement in the sense of the way things are going for the country. (In 1982, Americans were more satisfied with their personal fate than with the country's; since then, personal satisfaction remained about the same, but satisfaction with the national condition has improved.) This attitudinal measure also reflects an expectation that things will get even better, and a sharp decline in the proportion expecting the economy to worsen.

There is also increased satisfaction with the government; most recently, with the President's performance following the intervention in Grenada. Other measures of retreat from institutions, from the family to churches, have bottomed out and have started to climb back.

If one assumes that objective economic improvements have a beneficial psychic effect, which in turn provides the economy with a secondary boost, we must expect, over the next year:

(1) A decline in satisfaction, because the economy will not continue to grow and unemployment to subside at the same pace as in the last year;

(2) Even if these improvements continued, they would no longer have the same positive effect, as good economic news is quickly discounted and attention turns elsewhere;

(3) Various political developments are likely to dampen the sense of optimism about the government. Two examples are a possible Soviet walk-out from the arms control talks, and growing uncertainty over who the next President will be. Assuming Mr. Reagan chooses to run again, once a Democrat is nominated the small distance between the GOP and the Democratic candidate in public opinion polls will add a measure of uncertainty about future policies; and

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University Professor
George Washington University

(4) The inability to deal with the deficit will come more into focus. The effect of a new, tight monetary policy by the Fed after the election in an unfavorable economic climate has not yet surfaced in the public mind—and probably will not until later in 1984. However, it seems to affect expectations concerning "long run" interest rates as much (or more) than inflationary expectations.

(5) The wave of public satisfaction will crest later than that of investors. The GNS of people whose income is $30,000 or more rose only 5.4 percent in 1983 (compared to 1982), while that of other people rose 15 percent in the same period.

Business Investment

Lawrence Chimerine

Real GNP will grow by an average rate of about 4 percent between now and the end of 1984. A substantial shift in the sources of growth is under way, with the business sector becoming a larger contributor and the household sector contributing less. The reduced rate of growth expected for 1984, as well as the shift in composition, is typical for the second year of economic recoveries, although next year's GNP increase will probably be somewhat below the average of previous recoveries because of relatively high real interest rates and the overvalued U.S. dollar.

While a sharp slowing of the recovery is virtually certain, a complete stalling in the near term is still unlikely: (1) It is becoming increasingly likely that the period of rising interest rates has run its course, and rates will stay roughly at current levels, or decline slightly, later this year and into 1984; (2) The underlying fundamentals that are producing the recovery—including the sharp decline in the inflation rate already experienced, prospects for continued moderate inflation, improvement in the financial condition of most U.S. households, very stimulative fiscal policy, and interest rates that remain below those which prevailed in 1981 and early 1982—remain in place.

Lawrence Chimerine
Chairman and Chief Economist
Chase Econometrics

Initial GNP data for the third quarter show that equipment investment is continuing to make strong advances from its 1983:IQ low point. Total nonresidential spending increased at a 14.7 percent annual rate in the third quarter, following a gain of 8 percent in the previous quarter. Overall equipment spending has been remarkably robust for this stage of the recovery. The preliminary estimates indicate a much more solid recovery in equipment spending than that accompanying the 1974-1975 recession. If equipment investment continues to grow this quarter as it has recently, the previous peak in equipment spending could be surpassed by year-end or the first quarter of 1984. The underlying improvements in capacity utilization and demand are reinforcing capital spending. In addition, cash flow has rebounded dramatically, with the Accelerated Cost Recovery program providing an additional boost to corporate profits. Both profits and cash flow have been strong during the past three quarters.

Clearly the nature of capital spending is changing. Capacity utilization rates in many industries do not yet warrant large capital spending programs, but modernization, consolidation of facilities, and increasing efficiency are increasingly important as a share of total spending.

All of the 3.3 percent September rise in new orders for capital goods is attributed to the nondefense sector, continuing the generally upward trend in nondefense orders established early this year. This, too, provides hope for continuing advances in equipment investment.

Given the strong showing of investment through the early stages of the recovery and recent order patterns, the outlook for plant and equipment spending has strengthened somewhat. Investment in equipment will still be the strongest component of overall capital spending, with a roughly 8 percent annualized gain in equipment purchases during the current quarter, resulting in a 3 percent increase for the year over 1982. Further advances of about 8 percent and 6.5 percent in producers' durable equipment spending are anticipated for 1984 and 1985, respectively. In the long run, the outlook for investment depends heavily on a resolution of the deficit problem. If deficits are not reduced, investment spending as a share of GNP will remain below historical levels—in fact, a significant decline in investment could occur in late 1985 or beyond.

Business Finance

John T. Hackett

During the past three months, capital goods producers have finally begun to participate in the current recovery. Athough the pattern of the recovery is uneven and significantly slower than other sectors of the economy, the pace of incoming orders and requests for bids have improved significantly among many capital goods manufacturers.

Continued strength in demand for autos, housing, and consumer durables have played an important part in changing underlying attitudes regarding commitments for capital equipment.

A strong recovery pattern is occurring with producers of trucks, office equipment, truck trailers, and material handling equipment. On the other hand, manufacturers of construction equipment, machine tools, and agricultural equipment have not experienced any significant improvement in demand. They continue to struggle with large inventories of finished equipment, and there is no indication that demand may increase in the near future.

Among machine tool manufacturers, only those who produce equipment that can improve productivity and increase quality have participated in the recovery. There is little demand for traditional machine tools that increase manufacturing capacity. The absence of commitments for heavy construction programs, coupled with large inventories among dealers, has continued to depress production of construction equipment, and the severe summer weather in the Midwest and the PIK program has retarded demand for farm equipment.

John T. Hackett
Executive Vice President and
Chief Financial Officer
Cummins Engine Company, Inc.

Among the capital goods producers that *are* experiencing increased demand, we can expect dramatic changes in quarter-to-quarter performance reports. Efforts to reduce breakeven points and eliminate fixed costs during the recession should result in improvements in reported profits and cash flow, particularly during the early stages of the recovery.

Despite the signs of improvement in manufacturing activity, there continues to be a high degree of uncertainty regarding the sustainability of the current recovery. Managers see dangers in two directions.

The first is the possibility that overstimulation of the economy will result in faster-than-expected increases in demand that trigger cost pressures and substantial needs for external financing for working capital requirements and capacity additions—a return of inflationary expectations and the accompanying problems with labor negotiations and material costs.

The second danger is the possibility that the Federal Reserve will feel compelled to adopt a more restrictive monetary policy as a result of the continued federal deficit. Higher interest rates would quickly reverse the modest recovery among capital goods producers. Therefore, both consumer and capital goods producers have maintained a cautious attitude toward expansion. The recall of workers, increases in working capital, and capital spending programs, are being evaluated carefully to avoid many of the excesses that characterized other recovery periods. There is no question that the recovery is under way, but there is a substantial amount of concern regarding its sustainability.

In addition to the improvement in profit margins, manufacturing companies' net cash flow has improved significantly. Consequently, the demand for external financing is much smaller than is normally experienced during the early stages of recovery. During the early part of 1983, many companies took advantage of a strong demand for equity investments to repair and improve their balance sheets. The vast majority of the proceeds resulting from new equity issues were used to pay corporate debt or retire preferred shares. Most of the refinancing was complete by mid-year, and both equity and debt markets have experienced very light activity during the second half.

If business continues to maintain the current balance between internally generated funds and capital requirements, the long-predicted collision between public and private demands in capital markets can continue to be avoided. But the key to successfully achieving this balance is the pace of the recovery.

During the past recession, there was a significant amount of comment about the long-range outlook for U.S. manufacturing activity. With the recovery under way, there is a temptation to forget those problems and focus on the near-term opportunities. Nevertheless, the problems remain. The competitiveness of U.S. manufacturing firms has been severely weakened, and there is still a strong need for programs to provide transitions from maturing industries to growth industries. Also, the severity of the past recession resulted in a significant loss of financial strength among industrial companies. An economic recovery does not assure that these problems will be solved. Indeed, there are many manufacturers who have yet to participate in the current recovery.

The Personal Sector

Jack W. Lavery

As the first full year of the recovery ends, it is appropriate to assess the role of the American consumer—the leading player in the upturn to date. By my estimate, the consumer will have made a slightly above average contribution to an about average first year of recovery by the end of the fourth quarter. This view is based on the expectation that growth of real consumer spending in the current quarter will accelerate relative to the 3.5 percent annualized pace in the third quarter. This hypothesis is based on the following factors:

- Personal income is likely to continue to grow at a healthy pace as employment opportunities expand. Moreover, dividend income has begun to benefit from the gains in corporate profits, and interest income has accelerated, reflecting deregulation in the financial services industry.
- Consumer confidence and buying plans remain strong.
- The consumer's debt burden remains manageable. Consumer credit outstanding has edged up slightly, relative to disposable income, from its November, 1982 low point, but remains 2.4 percentage points below the November, 1979 peak of 17.8 percent. The consumer seems to have room to step up purchases with increased borrowing.

Jack W. Lavery
Chief Economist
Merrill Lynch & Co., Inc.

- Despite the increase of market rates during the Summer, consumer lending rates have continued to edge downward.
- As a result of tight inventories in the third quarter, the delivery of some durable goods, particularly autos and furniture, was deferred. These deliveries will show up as fourth-quarter sales.
- On balance, the fourth quarter of 1983 should register the strongest Christmas season in five years.

Beyond year-end, the consumer is likely to pull back somewhat. In the first quarter of 1984, income and spending growth may tend to reflect the lagged effects of the Federal Reserve's leaning against nonborrowed reserve growth. I expect that any slowing in growth of disposable income will be accompanied by a comparable moderation in spending, as consumers will be reluctant to let their rate of saving slip further. As the recovery moves into its second year, the consumer will make smaller relative contributions to real growth. The upward pressure on interest rates that I expect to begin early in the second quarter of next year, will push consumer lending rates up, but the overall economic recovery is not likely to encounter dramatic problems because of interest rates until 1985.

Housing and Mortgage Financing Outlook

Robert P. Ulin

The housing and mortgage financing industries are entering 1984 at a high rate of activity—only slightly below the peak rate of 1.8 million starts reached in the third quarter of 1983. I expect housing activity to remain close to this rate well through next year. The outlook is much more favorable than it was at a similar stage in recent business cycles. In these past cycles, housing was badly hit when the Federal Reserve tightened credit and interest rates rose sharply. The main impact of a countercyclical monetary policy fell on the housing industry, because there were restrictions on the rate institutions could pay on deposits and, thus, funds for mortgage financing would dry up. However, all this has been changed by deregulation.

The present outlook is very different. In 1984, the problem will not be availability of mortgage financing:

(1) With the new, variable-rate CD's to attract depositors, savings institutions will continue to be active mortgage lenders, aggressively seeking volume to match their deposit inflows;

(2) The burgeoning national market for mortgage-backed securities—that is GNMA or other participation certificates—is another key development. Active trading in these securities offers the institutions originating mortgages a ready opportunity for turnover, so their total mortgage lending is not limited by deposits or capital. Housing has broken out of its old strait jacket. A moderately tighter monetary policy will not disrupt funds for mortgage financing, because savings institutions can bid market rates for their deposits and turn over the mortgages to a wider national market, usually with a positive spread above servicing costs.

In 1984, I expect a total of 1.7 million housing starts, about the same as in 1983; the average size may be somewhat smaller and the proportion of apartments to single homes may be somewhat higher. Nevertheless, the total value of residential construction—including a large volume of renovations and additions to existing housing—will increase from about $130 billion in 1983 to about $150 billion in 1984. (In constant dollars, the change would be 9 percent.)

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In recent months, there has been a significant rise in reported prices of new homes and some increase in mortgage rates. Average monthly payments are up sufficiently to raise questions of affordability., However, affordability for the new buyer will be helped by government-subsidized mortgage programs (including continued subsidies by the states), and by the increasing use of variable-rate mortgages at low initial rates.

Builders will also continue to "buy down" mortgages as a way of reducing the cost; and competition is likely to head off any real surge in new-home prices. Overall, housing costs in 1984 will be rising about in line with personal income, which suggests that the recent level of housing starts can be maintained.

Furthermore, apartment building will benefit from the new tax provisions allowing faster depreciation write-offs, as well as the change in personal income tax, reducing the "marriage penalty." For working couples, this reduces the after-tax cost of mortgage payments on small homes or condominium units.

Our 1984 housing forecast assumes that Federal Reserve policy will be only moderately tighter: Interest rates for long-term Treasury bonds will not exceed 12 percent, and will probably average closer to 11.5 percent until late in the year. Assuming a normal spread, the commitment rate for new mortgage loans is likely to stay in the 13.5 to 14 percent range for conventional fixed-rate mortgages.

The Equity Market

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Our policy assumptions in forecasting various areas are as follows:

- The Federal Reserve will continue to walk a tightrope among its nervous constituencies—assuring the bond market of its continuing resolve in fighting inflation, and demonstrating its belief to the Administration and business that a sustained recovery is essential and must be accommodated.
- The Administration will become increasingly demanding of a strong recovery because of the election year.
- Congress will do very little of a substantive nature about the deficit, either in the form of increased taxes or reduced spending.

One year ago, it was relatively easy to forecast a stock market which would continue its strong performance as it moved from the expectation of recovery to the reality. In spite of a remarkably strong move from August to November in 1982, declining bond rates had left the equity risk premium still attractive for stocks.

Today, the situation is much different. The market has advanced 20 percent as measured by the Dow Jones. We have had a period of intense speculation in technology stocks and initial public offerings. While some large corrections of excesses have occurred in the last four months, the broad market averages are close to their all-time highs.

At the same time, the bond market is providing strong competition. The long Treasury market is yielding almost 12 percent. While we have grown used to rates in double digits, it is useful to remember that these are extremely high levels by historical standards. A move to 10 percent would provide a total return of almost 25 percent in 12 months.

Our assumption is that the economic recovery will continue through 1984. As a result, the stock market will have an underpinning of rising earnings. It is, therefore, difficult to construct a case which makes stock prices terribly vulnerable from here. (Individual stocks with earnings disappointments are dealt with mercilessly, however.)

The more difficult question is that of opportunity. Given the stock market's tendency to discount the next six to nine months, it is, presumably, already counting upon a reasonably strong first half of 1984. The question, therefore, becomes: What of the second half of 1984 and beyond?

We are disposed to take the optimistic view that this recovery is sustainable with only moderate interruptions. It will, however, require some help from interest rates. In some ways, we are once again in a situation where we must make some money in the bond market before we can expect real opportunity to develop in the stock market. Therefore, our present asset mix is essentially neutral at 60 percent equities and 40 percent fixed income.

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Research Bulletin

Business Leaders' Views On Protectionism in Western Europe

by Josef Adamek

The Conference Board

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Ninety companies responded to a Conference Board inquiry (questionnaires and interviews) that asked about their views and experience with protectionism. With the exception of a few responses from the Commonwealth countries of Australia and New Zealand, all the companies are based in European countries affiliated with the European Economic Community (EEC) or the European Free Trade Association (EFTA). Their individual involvements in foreign trade range from moderate to heavy.

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Protectionism: The European Perspective

FREE TRADE, like other principles stated in abstract terms, has become more an ideal than a policy. Everyone believes in free trade until trade balances, corporate profits, jobs, currency values, or other economic indicators signal a problem that may be the consequence of international competition. In recent years, many circumstances have united to foster some degree of protectionism in many parts of the world, including Europe.

In this context, The Conference Board believes it valuable to report a survey of European experiences and an overview of the difference between theory and reality in international trade policy.

Company Experience and Reflections

THE ECONOMIC WORLD's protectionist stance will get worse before it gets better. At least that is the view of most executives who responded to a recent Conference Board survey. A majority of them put the onus on other countries, which they expect to move toward heightened protectionist measures. In contrast, about half see their own countries standing pat, while two-fifths expect increased import barriers in their own countries. (See Chart 1).

This outlook for the world reflects a decided shift in the respondents' attitudes toward protectionism. All but three participants identify their industry's stance historically as in favor of free trade. But one in five indicates a switch toward more protectionist views—occasioned by developments of the past few years.

To some extent, this swing is attributed to experience. One in four claims to have gained some advantage from protective measures against imports. Specifics mentioned include better pricing, opportunities to restructure their operations and enlarge their work forces, and greater willingness to increase capital expenditures.

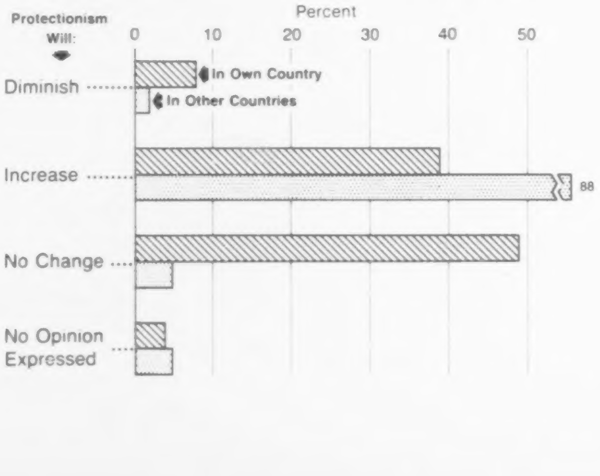
However, while citing such individual company benefits, the large majority acknowledge the potential for harm to general economic—and social—progress. And it was the adverse effects on the development of their respective domestic economies that the participants most often pointed to. Asked to rank serious domestic disadvantages of protectionism, the largest number responded with phrases like "delays economic advancement" or "impedes our economic growth." Frequently the phrase was "inefficient allocation of resources." Some were a bit more specific, pointing out that "it dampens the competitive drive," or "it supports artificially high capacities." A few found the evasion of corporate responsibility—shifting the burden to government—a large negative. The effect on the individual, as a consumer paying higher prices and/or a taxpayer subsidizing inefficiency, struck others.

To some, the general economic consequences—inflation or recession—were major hazards of protectionism. Beyond the domestic consequences, about one-quarter saw stagnation of world trade and the worsening of international relations as major adverse responses to protectionism.

Recognizing hazards and adverse effects, virtually all the respondents believe there are *some* circumstances under

Chart 1

Business Expections of Near-Term Developments



which protective measures are justified. The majority would put no time limit on the duration of some protective measures; others view barriers to imports as stopgaps.

Circumstance Justifying Protectionism	Number of Mentions[1]	Time Period		
		1 to 5 Years	Indefinitely; as Required	No Time Given
Countering or retaliating against foreign protectionism	85	16	62	7
Safeguarding basic defense industries	65	4	55	6
Protecting an infant industry	41	19	20	2
Adjusting to major technological change	40	22	18	—
Avoiding major unemployment	39	20	17	2
Preventing dumping	20	—	10	10
Countering exports from countries with low labor costs or low taxes	2	—	2	—
Others: protecting waning industries; buttressing past, inefficient management; protecting products associated with the nation	12	6	6	0

[1] 90 responding companies

Going beyond generality to specific protectionist methods, respondents report that their companies have definite opinions on the measures they would like to see used more—or less—against imports (Table 1). Most would like to see less use of virtually all measures—with the exception of voluntary restrictions, which is the only measure that a majority of company respondents want to see used more. They are particularly opposed to direct trade by government, and there is almost the same degree of unanimity in the desire for less use of government subsidies, quotas and burdensome administrative procedures. The relative unattractiveness of various measures is suggested by the proportions of those wanting more or less use. On that basis, voluntarism is most often acceptable; government involvement in trade is most often rejected. The feelings against burdensome customs procedures, government subsidies and quantitative restrictions (including quotas) are not as strong. Tariffs are evidently not as bothersome as quotas.

Evidently, these companies' own experiences with protectionist measures of countries to which they export weighed heavily in their assessments. Asked which instruments, when used by other countries, have had the greatest effect on their companies, tariffs, custom procedures and government subsidies are mentioned most frequently. Roughly one-third have been adversely affected by quotas, the imposition of standards, and what some regard as pressures of retaliation by foreign governments.

The details of current protectionist practices in West Europe are shown on pages 6-12. The respondents' experiences with respect to specific products are shown in the accompanying box.

That the cooperators resent other countries' protectionism is further indicated by the fact that almost three in four believe that those countries are not justified in imposing such protectionist measures. The other respondents countenance protectionism if it is applied for the same reasons that would justify it in their own countries.

Table 1: Preference Among Protective Measures

Measure	Direction of Preferences		Percent of Companies Affacted
	More (percent)[1]	Less (percent)[1]	
Voluntary restrictions	55	40	16
Common action by EEC, if it is concerned	35	50	30
Minimum import price	30	60	20
Standards	30	60	34
Cultural ties (invisible ties, emotional preference for national goods, closed purchasing policies)	20	68	48
Tariffs	18	65	54
Quantitive restrictions (quotas, proportional restrictions)	15	80	33
Subsidies (direct, indirect, credit terms)	10	80	19
Customs and administrative entry procedures	8	80	50
Pressure by individual governments (for example, threats of reprisal)	8	70	32
"Buy national" campaign	3	n.a.	n.a.
Government involvement in trade through its own agencies	2	85	n.a.

[1] Multiple responses; percentages do not add to 100

Products Affected by Protectionist Measures in Importing Countries

Countries Introducing Measures / Products Affected	EEC					Other European		Non-European Countries					
	In general	France	West Germany	Greece	United Kingdom	Spain	Sweden	United States	Japan	Canada	Australia	New Zealand	Most Countries
Automobiles	X					X			X		X		
Chemicals		X				X		X					
Control equipment			X										
Electronics		X											
Pharmaceuticals		X		X				X					X
Wood pulp	X												
Petrochemicals	X							X					
Metals	X							X					
Trucks		X											
High technology	X												
Cereals	X							X	X				
Oils and fats	X												
Wire and wire products						X							
Special steels		X				X		X	X			X	
Agrochemicals	X							X					X
Tires								X			X		
Textiles									X		X		
Horticultural products									X				
Tobacco products											X		
Fertilizers													X
EDP products		X							X				
Office instruments													
Machine tools		X											X
Telecommunications		X	X						X				
Flat glass								X					
Windshields			X										
Medical instruments		X					X						
Elevators		X			X	X							
Woolen carpets													
Food									X		X		
Shipbuilding	X								X				
Dyestuffs								X					

Countering Protectionism

Most of the responding executives see little possibility of countering protectionism at the company level. Among the minority that do cite company action, becoming more competitive is the most frequently mentioned recourse. Several suggest cross-border agreements, "quotas" or "mutual understandings" between representatives of various industry groups.

For the most part, respondents see government action as the only source of effective measures. As the tabulation below shows, the machinery of GATT (General Agreement on Tariffs and Trade) gets the heaviest vote of confidence, although others would rely on intergovernmental cooperation. If cooperation fails, some form of retaliation by their own governments would be considered:

Measures to Counter Protectionism	*Percent of Respondents Mentioning*[1]
GATT machinery	59
Common measures by the EEC or other supranational organizations	38
Own government's policies to improve economic performance	37
Appeals by government to trading-partner governments	34
Company action, individual or association	30
Retaliation by respondent's government	19
Government subsidies	7
No action should be taken	6

[1] Multiple Responses

Table 2: Free Trade Desires and Expectations of Respondents

Desired Free-Trade Area	Percent of Responses	Expectation: Possible Percent	Expectation: Never Percent
Limited to EEC	0%	12%	5%
Limited to EFTA	0	8	5
Include EEC and EFTA	0	15	5
Include all OECD Countries	50	42	22
Apply to the whole world	23	6	33
Except centrally planned economies	6	—	—
Except OPEC countries and other exceptions	6	—	—
No response	15	17[a]	30[a]
	100%	100%	100%

[a] These are round numbers; not counted responses.

An appreciable number of company spokesmen (44 percent) see domestic policy changes as the most effective action their governments can take; that is, actions and policies designed to improve prospects for internal economic growth. Tax reductions, support of technological development, less red tape, and the courage to resist industry demands for protection are among the specifics mentioned. However, a few would opt for subsidies to affected industries; and a few others would welcome a more laissez-faire stance. Indeed, choosing among regions or country groupings that might comprise a free-trade network, none would limit his hopes to the EEC or the EFTA, although half believe that the OECD countries would comprise a desirable area of free trade, although one in eight would make some exclusions. (See Table 2.)

Is such a free-trade network—whether narrow or broad—possible? Almost two-thirds of the respondents say "never" or apparently considered the question too naive to answer. The respondents offer a dim prognosis, even for the OECD countries.

Prospects

Not only do the respondents anticipate a strengthening of protectionist postures in the near future, but very few profess any serious expectation that their hopes for more free trade will ever come into being even in limited regions, let alone worldwide.

Protectionism—In the West European Context

THE EXTENT OF protected, or "managed trade," is growing steadily. Estimates vary from one quarter to more than half of all world trade. Subject to protectionist measures are the total trade of centrally planned economies; OPEC oil exports; the bulk of trade in agricultural products; trade in some primary products; a significant proportion of trade in steel; large flows of trade in manufactured products, especially automobiles, shipbuilding; consumer electronics, aircraft; shoes and textiles.

Free trade, the advantages of which are catalogued in economic theory, is supported by virtually all developed market-economy countries and most international organizations. GATT, OECD, the EEC, and EFTA are organizational manifestations of dedication to this principle. Nonetheless, there is no question but that constraint of trade is increasing. Under severe pressure, even the governments and businesses most dedicated to free trade cannot avoid moving toward what some euphemistically call "managed trade."

Within the EEC, most attention is given to measures adopted in agriculture (Common Agricultural Policy), textiles, footwear, shipbuilding, aircraft, microelectronics, telecommunications and steel. In addition to the protective measures taken by the EEC as a whole, unilateral protective policies are also adopted by individual member states. These are chiefly directed against Japan—but also affect other member countries.

Current Protectionist Practices in Europe

Trade policy toward other countries is normally decided by national governments. The only exception is the European Community, although member states are reluctant to transfer sovereignty over trade totally to the Community.

The Treaty of Rome, which created the Common Market in 1957, set out common tasks for the EEC. (See box.) However, each member has enough scope to realize its national aims—not only in trying to influence EEC policy, but also in acting independently of it. Every member state can thus influence exports from and imports to its economy by concluding bilateral cooperation agreements with other trading partners and adhering to a minimum common policy.

European Economic Community

As far as protectionism is concerned, the EEC countries apply both common and unilateral approaches.

Common Measures

Protectionism in the European Economic Community is concentrated mainly on agriculture, steel, textiles, footwear, shipbuilding, aircraft manufacture and electronics. It includes both barriers and subsidies.

Economic Activities of the EEC

Among the economic activities given to the EEC by the Treaty of Rome were:

(1) The elimination, as between member states, of customs duties and of quantitative restrictions in regard to the import and export of goods;

(2) The establishment of a common customs tariff and a common commercial policy toward third countries;

(3) The abolition, as between member states, of obstacles to freedom of movement for persons, services and capital;

(4) The establishment of common policies for agriculture and transport;

(5) Ensuring that competition in the Common Market was not distorted;

(6) The association of overseas countries and territories with the Community.

Ninety percent of *agricultural* products (all except potatoes and agricultural alcohol) are protected under the EEC's Common Agricultural Policy (CAP). Subsidies for 1982 were estimated at $13 billion. CAP guarantees farmers a preset price and intervenes to buy surpluses if prices fall below that level. These are sometimes sold—within the Community or to the U.S.S.R.

In practice, then, agriculture is totally shielded from international competition. In order to maintain high prices for farmers, a variable system of levies at the EEC's borders aligns the price of imported food with domestic prices that are set each year. High prices are maintained despite a high agricultural surplus, especially of dairy products, sugar, beef, butter and some others. The Commission makes day-to-day operational decisions on import levies and other agricultural operations.

EEC policy in the *steel* industry is also highly protectionist, with all iron and steel trade effectively regulated. This industry suffers from both cyclical and structural problems. There is a persistent excess capacity and overmanning which, combined with an outmoded productive structure, makes it impossible for most EEC firms to compete under normal conditions on the world markets. This protectionist policy relies to a large extent on price loans, subsidies and import limitations. Steel is subsidized by loans at preferential rates, government equity participation on terms that are not consistent with commercial considerations, and straightforward cash grants.

Since 1977, with the introduction of the so-called Davignon Plan, various measures have been taken to give greater protection to the industry. The Davignon Plan initially involved voluntary reductions in deliveries by EEC steel firms along with a mixed system of obligatory and recommended prices floors. Steel is protected from low-priced imports through fixed minimum prices (known as basic prices), based on the production costs of Japan.

Self-limitation agreements were also negotiated by the commission in 1978 with Australia, Austria, Finland, Japan, Norway, Spain, Switzerland and Portugal. Only the two last mentioned were not required to observe self-limitation agreements in 1980.

In 1980, the Commission imposed compulsory production limits on the EEC's 350 leading steel firms, and tightened them further in 1981. The Council of Ministers agreed again to reduce "self-limitation" imports from 14 countries to a level that would drop 1983 exports to the EEC 12.5 percent below the 1980 level.

While steel-exporting members of the European Free Trade Association (EFTA) do not have specific quotas, reference is made to "traditional" levels of exports, adjusted in line with the internal steel-market situation in the EEC. Thus, even in the form of "self-limitation," the spirit of the EEC-EFTA free-trade treaties is violated, with quotas on iron alloys from Norway, Sweden and Austria.

The import of *textiles,* which is a relatively inefficient industry, is highly restricted—access to the market is virtually barred. The EEC participates in the Multifiber Arrangement (MFA). The protection of manmade fiber imports has brought conflict, primarily with the United States. British, French and other EEC textile producers are seeking to further curb sales of U.S.-made polyester filament yarn by imposing protective duties. The EEC slapped new duties on U.S. synthetic fiber imports in 1980, when a 17 percent duty was imposed on acrylic fibers. Dumping complaints were lodged in December, 1981, against U.S. manmade fiber companies by the EEC synthetic fibers industry's European Council of Chemical Manufacturers Federations (CEFIC) organization. They concern textured polyester yarn exported to Italy. In May, 1981, an antidumping duty of up to 14.2 percent was levied on imports from the United States of vinyl acetate monomers. All these measures adversely affect imports from the USA.

In order to restrict imports of textile products from Portugal, Greece (prior to Greek membership), Spain and Turkey, while respecting the terms of preferential trade agreements, EEC forced these countries to accept self-limitation by threatening to apply unilaterally the safeguard clause (entitling the importer to apply restrictions in specific circumstances) included in some of these agreements. The EEC has voluntary *export* restraint agreements on cotton products with Spain, Portugal, Turkey, Malta, Cyprus and others.

In 1978, under pressure from the shoe industry, the EEC introduced a system of statistical surveillance for imports of *footwear* from Spain, developing countries, and state trading countries. It has been proposed that a "Multifootwear Arrangement" on imports, similar to the Multifiber Arrangement, should be negotiated.

A system of ceilings for *paper* has been applied since January, 1979, affecting imports from Norway, Sweden, Finland and Austria. The EEC imposed duties of up to 10.9 percent on a range of Swedish paper products that exceeded ceilings for export to the EEC in late 1982.

Free Trade

Economic theory, which is presumably unbiased by vested interests and prejudices of economic agents, generalizes the position of various groups in the society and compares the losses and gains of the society as whole. From this vantage point, most economists have always favored free trade, and have elaborated on its benefits—always stressing the long term.

The major benefits attributed to free trade are gains in consumption and production; economies of scale; innovations; a more competitive economy; and domestic price stability, all of which are viewed as strengthening the whole society. Elaborating briefly:

Consumption gains: Everyone is a consumer, and in this role everyone benefits directly from lower prices when imports are not restricted. Part of this gain represents a transfer from those benefiting from an artificially high price, that is, domestic producers and, if a tariff is involved, the national treasury. The total benefit to consumers, however, will exceed transfer from these groups. Therefore, there is a net gain to the country as a whole.

Production gains: Replacing less efficiently produced output with imports permits the reallocation of some land, labor and capital from low-productivity industries into more productive employment, that is, industries in which the country has a comparative advantage. Some producers may lose, but the gains of others will more than balance the losses and, again, there is a net gain to the country as a whole.

Economies of scale: Free trade enlarges the market in which each country's industries can compete. Increases in the scale of operations often bring them the opportunity to gain from the cost reductions implicit in horizontal specialization as well as in increased vertical specialization.

Gains from competition: Enlargement of the market by trade liberalization heightens competition between foreign and domestic firms in the domestic market. It forces firms to abandon complacent attitudes of "live and let live," and to adopt efficient production technology and stimulate a search for technologically superior processes.

Price stability: Lower prices will have a one-time beneficial effect on wholesale and consumer indexes. As efforts to control inflation have frequently been made more difficult by the price and wage behavior of uncompetitive business and labor groups, lower import prices also contribute indirectly to easing the inflation spiral.

Innovation gains: Under liberal trade arrangements, the growth of an economy benefits almost as much from innovations made abroad as from those developed at home. An obvious corollary is that a conscious effort is made to improve the rate of economic growth.

Overall general gains: In the short term, protectionist micro-intervention can produce some visible results. In the longer term, and as intervention spreads over wider areas of the economy, help for one section will more often than not be a charge on the rest: The whole economy will become weaker, less productive, more inflation-prone, less able to strengthen and renew itself, and less enterprising and innovative.

According to theory, the danger is that there are good reasons to expect trade restraints to multiply. Strong compulsion, economic as well as political, is at work. Everybody resents privileges, and industries demand equal treatment from their own governments. With each grant of protection, it becomes more difficult for a government to refuse to give a new claimant what others have obtained in the past.

If the *shipbuilding* industry of EEC had been exposed to the full impact of market forces over the past several years, little would remain of it. It has survived only by large-scale financial protection through subsidies and other cash aids ($700 to $800 million annually), together with a system of preferential public purchasing and a virtual partitioning of national markets—often incompatible with the principles of EEC. The industry also attempted to protect itself from Japanese competition through a market-sharing cartel arrangement with Japanese shipbuilders.

Telecommunications are state monopolies in EEC countries. The Commission wants member governments to open their telecommunication-equipment market to firms from other member states, but is keen to maintain discrimination against non-EEC-based firms. The Commission does not apply GATT rules by opening up public procurement to international tenders for telecommunication equipment, nor does it appear ready to change this situation.

EEC industrial policy is protectionist in *high technology* sectors as shown in some EEC documents. For example, "Recommendations on Telecommunications" (September, 1980) suggests Community financial support for public purchases from specially created groupings of EEC companies in high-technology projects. In "A Policy for Industrial Innovation—Strategic Lines of Community Approach" (October, 1981), it is suggested that "the Community must create through all its policies a European industrial dimension with bias in favour of European companies."

The European Strategic Programme of Research in Information Technology (ESPRIT), created in the Summer of 1982, was backed by the EEC with $50 million. The participants were a dozen leading electronics groups in a research and development program designed to give Europe a machine tool industry for semiconductor chips, which are now imported from the United States and Japan.

Because of the steep increase in market shares of Japanese products, especially cars and entertainment electronics, many discussions about adopting a common European Community attitude toward Japan have been held. Still, the EEC as a whole has done relatively little to limit Japanese imports. It acted only in steel, and by introducing a market-sharing shipbuilding cartel. Nevertheless, of the 89 import quotas in force in the EEC, 57 discriminate directly against Japan.

In February, 1983, Japan announced it had reached an understanding with the EEC Commission:

Total Japanese exports of VTR's, including chassis kits, would not exceed 4.55 million units in 1983, and will be exported in moderate quantities for three years. An export floor-price system was introduced. Exports of color TV

Managed Trade—The Reality

In the second half of the 1970's, many circumstances forced (or at least induced) governments to depart from free-trade principles. This created strong motives for protectionism in spite of the theoretical argument that trade restraint is harmful in the long term. In the early 1980's, most of these motives converged, reinforcing the call for protectionism.

- *Difficulties in Structural Adjustment*—In most countries, some domestic producers in some industries are no longer in a position to compete on equal terms with foreign suppliers because much of the capital stock and equipment of domestic industries is outmoded and inefficient. Although their problems are sometimes traceable to past inefficient management, these producers hope to achieve "breathing space" to facilitate restructuring by phasing out old equipment and reinvesting in new. Similarly, excessive capacity in many countries (e.g., the steel industry) has increased the difficulty of selling all they produce. Because of the difficulties and costs of adjustment, many important industries seek to solve their problems by asking for protection.
- *Differences in Wages and Degree of Economic Development*—A high standard of living of the working population of an importing country is threatened by the "unfair" competition of workers in other countries, who are willing to work for a much lower wage. A major factor creating this differential, particularly among more developed nations, has been a new social attitude toward the whole income-determination process—divorcing it more and more from productivity considerations and tying it even more closely to the bargaining power of individual sectors of the economy. The result: Indexation, closed shops, and, in some instances, monopolies of nationalized industries.
- *Abrupt Rise in Market Shares*—New centers of higher competitiveness (such as the newly industralizing countries and, among industrialized countries, Japan) have emerged. When the export drive of such a country concentrates on a few items, it becomes possible for it to increase meteorically its market share of some products in importing countries. In the importing country, it become extremely difficult for the corresponding industries to adjust in a short time.
- *Unfair Competition*—Such practices as dumping can, of course, be disruptive for the industries concerned in importing countries. State subsidies have made it possible for the subsidized industries to export more cheaply.
- *Balance-of-Payments Problems and Exchange-Rate Movements*—A large overall payments deficit caused by an uneven timing of recession or by unavoidable developments in the terms of trade (i.e., a rise in prices for raw materials, especially oil), can lure governments to compensate by reducing other imports. A related issue is the possibility of manipulation of exchange rates. A lower price for the exporting country's currency (e.g., a lower dollar in 1978-1980) would make all exported goods cheaper. There is a widespread view that the switch from fixed to floating exchange rates for the major currencies has produced changes in the competitiveness of domestic goods vis-a-vis foreign goods.
- *National Security and Nationalism*—Countries are loath to see domestic industries critical to their nation's defense savaged by lower-cost imports. Defense-related industries are vulnerable when confronted with heavy international competition.

Similarly, countries take pride in their historically preeminent identification with certain products (French wines, Swiss watches, etc.). They refuse to see their national identity lost through free trade.

Such pressures are not all new. As early as 1910, Philip H. Wicksteed, speaking for the British Labor Movement, characterizing the most probable attitude of people toward the work of others, said: "The more abundant supply of any desired thing, however wholesome the need which it meets, and however great the gain to the well-being of society in general which it secures, may plunge some members of the social organism into penury. Thus, every man who lives by supplying a want, dreads anything which tends. . .to supply it more easily and abundantly. It is to his interest that scarcity should reign in the very thing which it is his function to make abundant, and that abundances should reign everywhere else. The desire for relative scarcity of his own skill, or his own commodity, is therefore only too natural and intelligible in any man."

In January, 1982, at the European Management Forum, Emile van Lennep, Secretary-General of the OECD expressed the dilemma more pragmatically:

> "But even the most ardent supporter of free trade must recognise that if the basic macro-economic conditions are wrong—that is, if price signals are distorted by high and uncertain rates of inflation, if slow growth provides insufficient jobs for displaced workers to go to, and if there are wide fluctuations in interest rates and exchange rates—then the benefits and costs of free trade can become very unevenly distributed both between and within countries."

tubes will be moderate in 1983 to 1985. Exports of large tubes will not exceed 900,000 units in 1983. Export floor prices on NC lathes and machining centers were to be extended for 1983 and considerably increased. Passenger car exports were to be moderate in 1983, as were exports of commercial vehicles, forklift trucks, motocycles and quartz watches.

The EEC agreed to withdraw antidumping proceedings initiated by European VTR manufacturers. French customs-clearance procedures for Japanese VTR's were to be normalized.

Unilateral Measures within EEC

EEC policy does not prevent unilateral protectionist actions by member states. More than 400 cases of suspected or outright illegal barriers to trade among member states are under investigation by the Commission at any one time. The rate has risen fourfold since the late 1970's. In the main, these cases concern national regulations fixing technical and quality conditions (so-called commercial regulations), disregard of Community directives on public purchasing policies, aids to industry, and procedures restricting imports. The 10th Report on Competition Policy (February, 1982) by the Economic and Social Committee of the European Community summarized and criticized protectionism within the EEC: "There are many instances of protectionist measures being adopted by Member States' governments to help their own industries, particularly in times of recession and falling employment. . .Even where the European Court had condemned some examples of discrimination, Member States have taken several years to comply with its ruling, or have ignored it. These distortions have a considerable hindrance effect on intra-community trade and competition."

Examples of individual country practices follow:

BELGIUM: At the request of the Benelux countries, the Japanese have to apply a system of export surveillance on electronic shipments to their market.

DENMARK: This country subsidizes certain public-sector contracts for using Danish material in preference to imported material.

FRANCE: Beginning January 1, 1932, France proposed a two-year plan to reestablish its internal market for certain domestic items, such as wood products, machine tools, and textiles. France is also aiming at "reconquering" the domestic market for leather products and shoes through government aid, and pressure on companies to turn to French suppliers. Manufacturers will be given import licenses in proportion to their export success, while distributors will have to buy a quota of French goods before being allowed to import.

The concept of "reconquest of the internal market," according to a statement by the French Foreign Trade Minister in October, 1981, should not mean protection for weak French firms, but rising competitiveness of French companies to ensure their better performance in home markets. In order to give French firms access to sources of financing, state aid would be channeled to potential "winners," giving them a breathing space to overcome "unnatural" difficulties. The nationalized firms will get additional state aid and preference in state contracts. Subsequently, France announced subsidies to steel, heavy chemicals, and electronics, as well as to such nationalized companies as Renault and Pechiney.

In June, 1981, President Mitterand defined the French attitude as one of defending the legitimate interests of France, its workers, and its exports, especially against Japan: "We cannot allow our trade to be swamped by Japanese competition. . .we cannot expose our automobile industry and other sectors to greater danger just because Japan is expanding its trade. . .we are ready to open a dialogue with Japan at EEC level, or bilaterally so that the interests of one side are not allowed to run counter to the interests of the other."

The "Plan calcul" requires French firms wishing to buy foreign equipment to obtain advance approval from the French Government. This approval is granted only if a domestic firm is unable to provide the product needed. As a result, the market for small and medium-sized computers is reserved for French firms.

During the past few years, France has acted to limit import of yarn from Greece, sweaters and wine from Italy, and fruit and steel from Spain.

On October 20, 1982, the French Government announced measures to limit imports and encourage exports:

— All products sold in France must, in the future bear a label showing origin by country.

— All documents accompanying goods passing through customs must be written in French.

— State-owned companies must establish (before the end of each year) a "balance-of-payments" sheet, showing foreign and domestic partners.

— There is 30 percent tax relief on business expenses incurred in export operations.

Extent of Protectionism

Protected trade is sometimes called "managed trade" or "trade affected by restrictions." Its share in world trade is high, since it includes:

(1) all trade with and among centrally planned economies;
(2) OPEC oil exports;
(3) the bulk of trade in agricultural products;
(4) trade in some primary products;
(5) a significant proportion of trade in steel and steel products;
(6) large flows of trade in manufactured products (e.g., cars, consumer electronics, aircraft, shipbuilding, textiles);
(7) countertrade—some 20 to 30 percent of world trade; and
(8) the intracompany trade of multinationals.

It is difficult to measure the actual extent of protectionism, since all restrictions are not generally known. Even if all the restrictions were known, it would be impossible to measure their effect, as the potential imports which protection keeps out cannot be estimated. Further, an uncertainty spreads over the whole areas of unconstrained trade when restrictions proliferate. This outcome is also not measurable.

There is even some disagreement as to what should be included as "protectionism." For instance, Dutch Prime Minister Luggers declared at the meeting of EEC summit in December, 1982, that negotiated restraint agreements are, in his opinion, totally in harmony with the pledge for universal free trade. As the share of managed trade is difficult to measure, estimates of that share differ widely:

- According to Jan Tumlin of GATT, in mid-1980, 40 to 44 percent of total world trade was subject to protectionist measures.
- The *London Institute of Economic and Social Research* calculated the percentages of imports subject to non-tariff restrictions for 1980 at 45 percent for the EEC, 46 percent for the United States and 59 percent for Japan. According to the study, in the EEC this percentage was nearly zero in 1975.
- *The Economist* ("Is Free Trade Dead?" December 25, 1982) estimated that "a quarter of all trade in goods is conducted by barter today. Another quarter involves the internal transactions of multinational companies. A third quarter is subject to quotas or other agreements or export restraint. Thus, the final quarter of world trade is having to do all the jobs that markets are there for—providing a clearing house where surplus production can meet unsatisfied demand."
- *Mrs. Sheila Page* of the National Institute of Economic and Social Research (NIESR) in London, calculated that in 1979 about 46 percent of world trade was protected. In 1974, this share was only about 40 percent. The share of managed trade in manufactures rose from 13 percent in 1974 to 21 percent in 1979. In that period it rose to 38 percent in textiles to 48 percent in clothing, and to more than 80 percent in aircraft and shipbuilding.

GERMANY: An annual growth rate of 10 percent for Japanese car imports was imposed in the form of voluntary limitation.

GREECE: Practically all foreign trade is managed. In 1982, Greece instituted nontariff barriers on footwear. There are also subsidies of up to 25 percent on various exports.

IRELAND: Before Ireland entered the EEC, it banned imports of poultry and eggs. These measures have not been removed, in spite of pressure from the Commission. "Buy home products" campaigns also exist.

ITALY: The government's subsidies to petrochemical projects in Southern Italy require that semiconductor devices be purchased from Italian suppliers even if the foreign supplier can offer higher quality.

Italy applied import quotas at the beginning of 1980 against U.S. polyester yarn, staple and fibers. That same year, an Italian court ordered two U.S. companies to cease shipment of fibers whose price did not include an upward adjustment to cover the price difference of the raw materials between the United States and other producers.

NETHERLANDS: The Netherlands has imposed a voluntary limitation on Japanese car imports so that the 1981 level should not exceed the level of 1980. The government has instructed the national police to buy only Dutch-built Volvo cars.

UNITED KINGDOM: The British motor industry has an agreement with Japan that Japanese exports of cars should not surpass traditional levels. A similar arrangement exists for imports of Japanese consumer electronics.

A 1981 change in United Kingdom health regulations, which banned imports of French and other turkeys and poultry, was aimed at protecting the British poultry industry and sheltering it from pressures to modernize and increase efficiency. A new factory in France, built with French Government and EEC regional development subsidies, can supply the entire British market. There were also restrictions on imports of poultry and eggs from countries that vaccinate their birds against fowl pest. The government also earmarked up to £14 million for a "Food from Britain" campaign.

At the beginning of 1980, with the consent of the EEC Commission, the United Kingdom established quotas on imports of manmade yarn from the United States, such as polyester yarn; and, without the Commission's agreement, imposed quotas on imports of nylon and tuft-nylon carpets. (There is also protection on footwear.)

The United Kingdom gives subsidies, worth 37 percent of contract prices, to state-owned British shipbuilding companies.

European Free Trade Association

The seven (Austria, Finland, Iceland, Portugal, Norway, Sweden and Switzerland) members of the European Free Trade Association (EFTA) represent a free-trade area in which industrial products can be exchanged, free of duties and quantitative restrictions. Together with the EEC, after a 1972 agreement, this represented a free market with more than 300 million inhabitants, comprising 17 countries and accounting for more than 40 percent of total world trade.

However, some protective measures exist. EFTA's application of the Davignon plan places limits on steel imports, in order to protect home industries. EFTA states also apply a system of ceilings, similar to that of the EEC, on paper imports. Governments have granted aid to papermakers in Sweden and, to a lesser degree, Norway.

Some unilateral measures protecting trade have also been introduced.

AUSTRIA controls imports of some food products, tobacco products, clothing and aircraft.

FINLAND extended the minimum import price on ladies' hosiery for 1981.

ICELAND, in order to protect domestic industry, introduced (in September, 1980) a temporary special charge of 40 percent on confectionary sugar and chocolate, and 32 percent on pastry, biscuits, cakes and other bakery products. New deposits on imports were also established. There are controls on tobacco.

NORWAY controls imports of vehicles and radio equipment, textiles and clothing, telecommunications apparatus, aircraft and ships.

SWEDEN controls imports of textiles, clothing, footwear and aircraft. Shipyards took advantage of $2.2 billion in subsidies between 1976 and 1980. They will get another $0.8 billion by 1985.

SWITZERLAND controls imports of textiles, clothing and aircraft.

A Note on Costs

Attempting to assess who gains and who loses, the OECD projected per capita GDP in 1990 for various countries and regions under free trade and under increased protectionism:

- Under protectionism, the losers would be the more highly developed countries of North America, Japan and the EEC.
- Under free trade, the losers would be Australia, New Zealand and the non-EEC countries of Western Europe.
- Only the developing countries come out even.

Source: OECD, *Interfutures*, Paris, 1979.

Other Multilateral Approaches

There are multilateral agreements on commodities using quotas and thus influencing prices, e.g., the *International Sugar Agreement* and some others.

In the framework of GATT, in 1961, an agreement was concluded on cotton textiles, later changed into a *Multifiber Agreement* (MFA). In 1981, its prolongation until 1986 was negotiated. This agreement chiefly concerns trade between developed and developing countries. It is the de facto acknowledgment that normal GATT rules cannot apply to world trade in textile products. It serves as the framework for bilateral arrangements between governments on quantitive limits of trade. Fifty-one countries participate in the MFA.

The Association of West European *shipbuilders* (AWES) concluded an arrangement in 1976, in the framework of the OECD, for an orderly reduction of shipbuilding capacity.

Under pressure, particularly from French groups, *machine tool* makers from EEC countries, Norway, Sweden, Spain, Austria and Switzerland called for limits on imports from Japan in late 1980. The Japanese Machine Exporters Association responded, under instruction of the Japanese government, by extending an export agreement with the United States and Canada, existing since 1978, to cover also the European countries. The cartel covers minimum prices, but not quantitative limitations.

Many Faces of Protectionism: A Glossary

For centuries, tariffs were the primary form of protectionism. Since World War II, protectionism has taken on new, less easily measured, forms. Although these nontariff barriers to trade have been attacked, their importance is growing. These practices include both public and private attempts to restrain trade. Because they are sometimes difficult to identify, it is not possible to estimate their impact. Although new restraints continue to be invented and estimates of known ones run into the hundreds, the partial list that follows identifies those most often discussed.

CONSTRAINTS ON IMPORTS

Specific Limitations

Embargoes: prohibition of imports of specific products from specific countries.

Import licenses: required for specific products and must be granted before trading. Sometimes approval is granted only if product is not made domestically.

Minimum import price (or "trigger price"): imports restricted if exporter does not observe minimum price (i.e., antidumping duties) or if the price does not equal or surpass that in the domestic market.

Organized free trade: an extension of organized market trade. Involves a market-sharing arrangement that is limited to specific amounts of sensitive, highly competitive goods.

Orderly marketing agreements: voluntary export restraints (see below) with explicit and formal government intervention. Agreements are negotiated between exporting and importing countries.

Proportional restrictions of foreign to domestic goods: definition of the quantity of imports of certain products as a proportion of total domestic output of the same products. May require use of a minimum proportion of domestic content in specific imports.

Quotas: direct, absolute and visible limitations on quantity or value of specific products imported from a country or group of countries during a specified time period.

Voluntary export restraints: similar to quotas but not involving formal restrictions. Arrangements (varying from informal to formal) for an exporting country (often under pressure from an importing country) to limit its traded product(s).

Customs Procedures

Customs and administrative entry procedures can become formidable barriers if used with the intention to make the entry of foreign goods more difficult by increasing exporters' costs.

Border tax adjustments: imposition of some or all of the tax levied by the importing country on similar domestic products. Some exporting countries may remove such taxes from products destined for export.

Documentation requirements and entry fees.

Import deposits: required by governments from domestic importers prior to the importing of goods. A specified proportion of the value of the import (as high as 100 percent) must be put in a noninterest-bearing account. Often used by countries experiencing balance-of-payments difficulties.

Reduction of customs clearance facilities: variations in the number of customs offices permitted to clear specific categories of goods, or location away from normal trade entries.

Valuation of imports: may be left to arbitrary discretion of customs officials, as against published tariffs.

Standards

Health, safety and quality standards, if not sufficiently clear, or if interpreted arbitrarily, can discourage trade. Efforts to create European standards had led to only 130 harmonization directives by the end of 1982—and those related to goods that could be harmonized easily.

Government Trading

Direct participation by governments in trade favors domestic producers through procurement policies that favor domestic goods without respect to price and quality. In some nonmarket economies, exports are financed by state agencies. (This is done by market economies in exceptional cases.)

Countertrade

Arrangements whereby exporters agree to purchase equivalent values of goods from the buyers.

Intracompany Trade by Multinationals

An additional barrier to conventional market mechanisms that is estimated to amount to about one-fifth of the manufactured exports of the industrialized countries.

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by Francis J. Walsh, Jr.

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INTRODUCTION

Keeping score in business is more difficult than it appears to be at first glance. One of the reasons for the difficulty is the very abundance of information that is available to decision makers. Conventional balance sheets and income statements, for example, contain vast amounts of data that can be difficult to absorb and interpret, even in condensed form. Business executives, as well as investors and financial analysts, continually strive, therefore, to reduce quantitative accounting information to a more convenient form. Some believe that a few "key numbers" would be ideal in this regard. One result of these efforts is the development of various kinds of ratios: for example, earnings per share of capital stock, return on investment, return on sales, and so on. For the purposes of this study, these and many other such summary measurements will be described simply as financial indicators.

The Problem

Business enterprises make extensive use of financial indicators as yardsticks for judging the effectiveness of the organization in achieving its objectives. Profit-seeking business entities often establish various indicators as the standards by which progress can be weighed in the effort to attain corporate goals. For example, a corporation's management may have as one of its goals the reduction of dependence on external debt. A popular financial indicator—the ratio of debt to shareholders' equity—is a quantitative measurement that shows very clearly how the company is doing in this regard. And an objective itself may be stated in terms of the quantitative measurement ("achieving a 15 percent return on investment").

The literature of accounting and finance contains many excellent treatises on the purposes, characteristics, and computational approaches of financial indicators. (A selected bibliography appears on page 15.) In spite of the extensive literature, however, not much is known about the day-to-day use of these indicators in business management. There is also a scarcity of information on the variety of possible summary measurements which are most often relied upon by senior executives—and for what purposes. Businesspeople frequently ask, for example, about the financial yardsticks that are most appropriate for planning and monitoring operations.

Another problem with financial indicators is that there are no guidelines, or "generally accepted" computational approaches, as there are in accounting. Each analyst or management group is free to indulge its own tastes in computing various ratios. This lack of uniformity makes comparisons difficult, and sometimes impossible.

In the area of external financial reporting, which is governed by a voluminous collection of generally accepted accounting principles (GAAP), very little attention has been given to the computation and reporting of summary indicators of financial performance. Earnings per share (EPS) is just about the only summary measurement for which GAAP has been defined (Accounting Principles Board Opinion No. 15, May, 1959) and for which disclosure is mandatory.

A related problem is the allegation that managers of U.S. corporations concentrate too much attention on managing for short-term results. "Improving next quarter's earnings per share" is often cited as an example. The critics claim that managerial preoccupation with such short-term quantitative goals tends to discourage risk taking in ventures that have only a long-term payoff, and thereby weakens the ability of U.S. business firms to contend with foreign competition.

The primary purpose of this study was to learn the preferences of a representative group of chief executive officers and other senior executives concerning the ratios and other financial indicators that they use regularly for various types of decision making. The study also seeks to identify

Who Should Read This Report

Many Conference Board research projects in the field of business management practices are, by their nature, designed primarily for executives who specialize in some specific functional area of management: human resources, planning, marketing, finance, and so on. Occasionally, however, a topic comes to the surface that does not fit so neatly into an organizational classification. The subject of this report is an example.

While the title might suggest that it is designed primarily for financial executives, the principal input to this study was from chief executive officers (many with nonfinancial backgrounds), who supplied a great deal of information about the various financial indicators that they rely on for various decision-making purposes and who identified the measurements that they consider most important in guiding their enterprises. The preferences of their peers in this regard is likely to be of considerable interest to other CEO's.

This paper also points out the roles of various financial indicators in planning, budgeting and goal setting, as well as in the administration of executive compensation. Executives who are involved in such activities should find this information useful.

The Conference Board expresses its appreciation to the 101 executives, mostly chief executive officers, who took the time to complete a survey questionnaire for this project, and to those who, in addition, granted interviews and supplied exhibit material.

the indicators that these senior executives consider most important.

Sources of Information

Chief executive officers of a representative group of U.S. corporations were the principal sources of information for this study. A sample of 500 firms was chosen from among the *Fortune* 1,000 industrial companies and 50 firms in service industries were added to the mailing list. A questionnaire was addressed to the chief executives of this group of companies. In addition to the mail survey, follow-up interviews and telephone conversations were held with some of the cooperating executives.

A total of 101 usable survey responses was received. Seventy-eight of the questionnaires were completed by CEO's and twenty-three were answered by other top-level executives (e.g., vice presidents for finance or planning, or the corporate controller). The surveyed executives were asked to indicate the principal areas of management specialization through which they rose to their present positions. Table 1 summarizes the answers to this question.

Nine out of ten of the companies represented in this study are in the manufacturing sector: 49 are durable goods manufacturers and 41 are producers of nondurable products. The remaining 13 firms are in the nonmanufacturing category, principally in the retailing and extractive industries.

External Reporting of Financial Indicators

Although the principal thrust of this project is to study the use of financial indicators in managerial decision making, it is enlightening to examine briefly the use of such quantitative measurements in the annual reports of corporations to their shareholders and the public. As already mentioned, earnings per share is the only summary indicator that is presently *required* to be disclosed in a corporation's annual report.

Table No. 1: Career Backgrounds of 101 Responding Executives

Background Area	*Total*	*Chief Executives*	*Other Respondents*
Finance	30	17	13
Marketing	25	17	8
Manufacturing	15	15	–
Engineering	9	8	1
Legal	7	7	–
General management	4	4	–
Planning	3	1	2
Research and development	3	3	–
Operations	2	2	–
Petroleum production	2	2	–
Company founder	2	2	–
Industrial relations	1	1	–
Total	103[a]	79[a]	24[a]

[a] Two respondents reported more than one background area.

Some companies, however, make voluntary disclosure of other financial ratios in various sections of their annual reports, for example, in the President's Letter, Management Discussion and Highlights, and the Financial Summary. In a recent study of the annual reports of 100 corporations, Professor Charles A. Gibson of the University of Toledo, Ohio, found that, in addition to earnings per share, the following six summary indicators were reported by at least half of the companies:

- Dividends per share
- Book value per share
- Working capital
- Return on equity
- Profit margin
- Effective tax rate

The author concluded that the relative neglect of financial ratio presentation in annual reports is unfortunate because it reduces the potential usefulness of these reports to investors and analysts, expecially in the case of some types of indicators (e.g., accounts receivable turnover) which are difficult to compute from the limited data that appear in the principal financial statements.[1] Gibson also pointed to the great diversity that exists in the computational methods used, which destroys the comparability of the measurements, citing debt ratios as a notable example.

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[1] Charles A. Gibson, "Financial Ratios in Annual Reports," *The CPA Journal*, September, 1982, pp. 18-29.

FINANCIAL INDICATORS AND "SHORT-TERM" THINKING

One of the objectives of this project is to study the reactions of senior executives to allegations that U.S. managers focus too much attention on financial indicators that measure short-term results; and that this preoccupation diverts many enterprises from the pursuit of long-term goals. As part of the survey, executives were asked to rate their own companies in this respect, and also to consider the charge as it relates to the business community in general. Table 2 summarizes the responses.

More than seven out of ten survey participants reject the assertion that their own firms' use of financial indicators causes them to focus too intently on short-term results. One board chairman observes: "Since our plan and budget this year is the first year of a five-year plan, it has to be considered in that perspective—not this year as an end in itself, but as the first step on the ladder that results from strategic planning and assessments for the long term."

Other firms have installed executive incentive compensation plans that assess performance over multi-year periods, thus encouraging managers to think in longer-range terms. And the chairman of the board of a machinery manufacturing company replies that short-term adjustments sometimes have to be made in response to current business conditions; but, he adds: "I have never perceived an action aimed only at creating good performance next quarter."

A number of comments emphasized the importance of balancing short-term and long-term considerations. For example, a company president observes: "I see no practical way that either short- or long-term thinking and planning can be ignored. They both have a vital part to play in organizing and operating a strong, enduring business venture. The balance of emphasis can and does shift between them, but both must be present."

Effects on Business in General

As the table shows, the respondents are nearly equally divided with respect to the effect of short-term indicators on business in general. Many of those who feel that short-term considerations receive undue attention place the blame on outside influences, specifically the investment community and the media. A petroleum company president declares: "The pressure applied by the financial community for quarterly earnings is severely damaging most companies' view as to what the critical measure of performance should be." And the chairman of a consumer products company adds: "The market drives the measurement, and the market is not concerned with the long term."

Other arguments put forth by the respondents in support of the hypothesis that business in general is propelled toward short-term considerations by the financial indicators that it monitors are:

—Financial indicators, by their nature, quite properly reflect the short term.

—Techniques for evaluating investment proposals enhance the attractiveness of short-time horizon projects because the results are more predictable and, therefore, the risks are less.

—The level of inflation in the future is unknown and unmeasurable; consequently, short-range projects are attractive.

Table No. 2: Financial Indicators and Short-term Thinking

Foster Short-term Thinking:	Yes	No	No Response
In own company			
CEO's	20	56	2
Other executives	4	16	3
	24	72	5
In business in general			
CEO's	34	36	8
Other executives	12	8	3
	46	44	11

On the other hand, those who contend that the charge of management myopia brought on by reliance on financial indicators is unfounded feel that:

—Short-term and long-term results are interrelated because, in order to satisfy a firm's needs for long-term financing, good short-term results (as shown by financial indicators) are necessary.

—Responsible boards of directors keep management from excessive concentration on short-term results.

—The charges are exaggerated. As one chief executive sees it: "I find the whole subject of 'U.S. short-term vs. foreign long-term' a typical media event. A complete manager must keep both outlooks in focus and control. A lot of so-called long-term approaches by foreigners is nothing so much as an excuse to cover poor short-term performances."

Again and again, the surveyed executives emphasized that financial indicators constitute only one of a number of tools in a manager's kit and, therefore, should not be blamed for the business community's alleged difficulties with foreign competitors. As the president of a forest products company concludes: "Assuming you have developed short- and long-term objectives for your company (which may be market, product, financial or some combination of them), the financial indicators of performance are a good measuring stick of the company's progress—but not the only ones any good manager uses."

KEY FINANCIAL INDICATORS AND THEIR USE BY SENIOR EXECUTIVES

It would probably be an exaggeration to claim that U.S. businesses are "managed by the numbers." But quantitative measurements of some kind are invariably fed into the decision-making process, at least to some degree, in all profit-seeking enterprises, large and small. Financial indicators are also closely watched by many people outside of the firm's management: for example, bankers, credit grantors, investors and regulatory authorities.

For the purposes of this study, a financial indicator is considered to be any single number that provides a user with an overview or summary of some financial condition, or the results of an activity. The net income amount that is reported on an income statement is a prominent example; but the many varieties of financial ratios are more commonly thought of in connection with financial indicators.

Kinds of Financial Indicators

Because there are no generally accepted rules or customs for the computation of financial ratios, there are almost no limits to the ingenuity of financial analysts in the invention of new relationships for which ratios can be computed. And they are equally resourceful in thinking up refinements in the calculation of some of the old standbys.

While it is not practical to list all of the possible ratios that may be used in business, the following classification system may be helpful in sorting out the more commonly encountered varieties. This system is based on one that is described in a widely used textbook on corporate finance:[2]

- *Profitability ratios*—measure management's overall effectiveness as shown by the returns on sales and investment. Some analysts consider this to be the most important class of financial indicators. The most frequently encountered profitability indicators are: net profit margin (i.e., percent return on sales) and rates of return on various measurements of investment (e.g., shareholders' equity, total capital, total assets, operating assets).
- *Liquidity ratios*—measure the firm's ability to meet its maturing short-term obligations. The current ratio and quick ratio are the most common liquidity indicators. (See page 11.)
- *Leverage ratios*—measure the extent to which a firm is financed by debt. They express the relationship between a company's debt structure and either its shareholders' equity, total capital, or total assets.
- *Activity ratios*—measure how effectively a firm is using its resources. Turnover rates, either for individual asset classes (receivables and inventories), or total assets are common examples. Number of days' sales in accounts receivable is another.
- *Growth ratios*—measure the firm's ability to maintain its position in its industry or in the economy. Rates of change over time in such key figures as sales and net income are common examples.
- *Valuation ratios*--measure the attributes of the firm's capital stock as an investment. Earnings per share, the dividend payout ratio, book value per share and the price-earnings ratio are examples. These indicators help to measure the effectiveness of the management in enhancing the wealth of the shareholders.
- *Other indicators*—There is a variety of indicators that do not fit neatly into these classifications but are useful in various decision-making situations, nevertheless. Some examples are: the break-even point, cost of capital, and the various screening techniques for evaluating investment proposals (e.g., net present value, internal rate of return, profitability index, and payback).

Frequency of Use and Importance of Various Indicators

One of the purposes of this study is to identify the key financial indicators that are most frequently consulted by chief executive officers and by other high level executives as inputs for various decision-making activities. For this purpose, the survey questionnaire listed 15 widely used ratios and other summary indicators and asked the respondents to indicate the decision-making situations in which they rely on the quantitative indicator in question. They were asked, in addition, to rank the three summary indicators that they consider to be most important.

By a wide margin, return on investment (calculated in several different ways) is not only the most widely used financial indicator, but it is also ranked first and second in relative importance by the greatest number of survey participants. Next in both frequency of use and perception of relative importance is the absolute net earnings amount reported on the income statement. Also ranking high on both counts are the net profit margin (i.e., the return on sales), and the debt ratio (calculated on several bases). The inventory turnover rate figured prominently in the frequency-of-use tabulation; while earnings per share ranked high on executives' ratings of relative importance.

Frequency of Use

Table 3 on pages 8-9 summarizes the executives' responses to the question of which financial indicators they most frequently use for the following decision-making activities:

—Planning, budgeting and goal setting;[3]
—Evaluating investment proposals;
—Appraising performance of managers and units;
—Awarding incentive compensation.[4]

As Table 3 shows, the survey participants volunteered the information that they also refer to financial indicators in such decision situations as:

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[2] J. Fred Weston and Eugene F. Brigham, *Managerial Finance* (Seventh Edition) Hinsdale, Illinois: The Dryden Press, 1981, Chapter 7.

[3] Readers who would like additional information on the use of quantitative measurements in planning are referred to Rochelle O'Connor, *Resource Allocation and Strategic Planning*, The Conference Board, Information Bulletin No. 99, 1981, and, by the same author, *Tracking the Strategic Plan*, The Conference Board, Report No. 830, 1983.

[4] Those who are concerned with the use of financial indicators in compensation decisions should see Harland Fox, *Top Executive Bonus Plans*, The Conference Board, Report No. 760, 1979; and *Executive Incentives: Long-Term Performance Share Unit Plans*, The Conference Board, Research Bulletin No. 132, 1983.

The Du Pont System of Financial Analysis: A Management Classic

E.I. du Pont de Nemours & Company of Wilmington, Delaware, was a pioneer in the development of financial measurements to facilitate management control. Beginning as long ago as 1919, the company devised a system of charts for tracking, in visual form, the financial results of the company as a whole, and also of the various units within the organization. The charts essentially presented manufacturing, sales and profit data for the various units, and for the company as a whole, showing trends over various periods of time and forecasts for the future. Numerical data supporting the curves plotted on the charts were also presented. These charts did not replace the customary income statements, balance sheets, and other accounting schedules—rather, they were intended to supplement the conventional presentations.

The Du Pont Company has long believed that return on investment is an excellent measurement by which a manufacturing company can assess its effectiveness. The charts were designed to place primary emphasis on this ratio and to permit management to scrutinize the factors entering into its calculation. The company developed and refined a custom-tailored formula for calculating return on investment that has often been described in financial management literature over the years, and that has been much-imitated throughout the business community. It is an outstanding example of the adaptation of the basic concept of a particular financial indicator to the needs of a specific firm. The generalized formula, as it is presently used, is summarized as:

$$\frac{\text{Pretax return on investment}}{} = \frac{\text{Pretax Earnings}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Average Gross Permanent Investment}^{1}}$$

Like many other participants in this study, the Du Pont Company does not rely on only one indicator of business performance. Cash flow, return on sales, turnover, internal rate of return, and earnings per share are also closely monitored. And management further stresses the importance of looking behind the numbers in the process of making business decisions. The strategic goal of the company is maximization of long-term economic value. To achieve this goal, management strives for technological advancements, environmental improvements and other nonquantifiable objectives; profitability is only one of a number of objectives.

As in any dynamic organization, the company continually modifies and refines its system of control. But, over the years, the concept of return on investment has been a prominent feature of the system.

[1] Current assets plus gross property, plant and equipment.

—Assessing overall corporate performance;
—Managing cash flow;
—Reporting to shareholders;
—Managing assets;
—Making decisions regarding financing;
—Making dividend decisions;
—Improving the company's bond rating.

In addition to the 15 financial indicators listed in the survey questionnaire, the cooperating executives also reported a number of other quantitative measurements that they refer to for various purposes. The inclusion of these additional measurements at the end of the table serves to demonstrate the inventiveness of both executives and analysts in devising new kinds of summary indicators. Brief comments on the financial indicators that were mentioned most frequently by the surveyed executives follow.

Return on investment (ROI) (449 mentions). This is a generic term for several highly regarded summary indicators. All of them relate income to some defined basis of investment. The general formulation is:

$$\text{Return on Investment (ROI)} = \frac{\text{Income}}{\text{Investment}}$$

The most frequently encountered measurements of investment are:

—Total capital (i.e., the sum of borrowed capital plus capital supplied by shareholders);
—Shareholders' equity (or, alternatively, "net assets," as reported by some executives);
—Total assets (sum of assets side of balance sheet).

Practice varies as to the refinements that can be made in individual companies' and analysts' computations of both income and the investment base. These variations appear most commonly in situations where segments of a business are being measured. In some cases, for example, "income" may be defined as "before taxes," or "before extraordinary items." And the investment base may be either an average of beginning and ending balances or a 12-month average balance; or it may contain other modifications as executive preferences may dictate.

One of the most interesting and widely imitated variations of ROI is the formula developed many years ago by E.I du Pont de Nemours & Company. (See box.)

Absolute net earnings (290 mentions). Although it is not a financial ratio, the net income amount displayed on an entity's income statement fits the definition of a financial indicator for the purposes of this study. In spite of the widespread use of ratios, the so-called "bottom line" ranks high in both frequency of use and the responding executives' perceptions of its relative importance. As noted

Table No. 3: Key Financial Indicators and Their Applications in Various Decision-Making Situations, As Reported by 78 Chief Executive Officers and 23 Other Senior Executives

	Decision Applications (number of times mentioned)					
Financial Indicators	*Planning, Budgeting, Goal Setting*	*Evaluating Investment Proposals*	*Appraising Performance of Managers and Units*	*Awarding Incentive Compensation*	*Other*	*Total Mentions*
Indicators of Return on Investment:						
Rate of return on total capital						
Reported by CEO's	48	51	35	30		
Reported by other executives	19	16	13	8		
Subtotal	67	67	48	38		220
Rate of return on shareholders' equity						
Reported by CEO's	58	42	21	27	1 (b)	
Reported by other executives	20	12	6	8	1 (c)	
Subtotal	78	54	27	35	2	196
Rate of return on net assets						
Reported by CEO's	2	1	2	2		7
Rate of return on total assets						
Reported by CEO's	5	3	4	5		
Reported by other executives	2		2	1		
Subtotal	7	3	6	6		22
Rate of return on replacement cost of assets						
Reported by CEO's		1	1			2
Internal rate of return						
Reported by CEO's		1				
Reported by other executives		1				
Subtotal		2				2
Total: return on investment	**154**	**128**	**84**	**81**	**2**	**449**
Absolute net earnings						
Reported by CEO's	62	54	56	54	1 (a)	
Reported by other executives	19	10	18	15	1 (a)	
	81	64	74	69	2	290
Debt Ratios:						
Debt to total capital						
Reported by CEO's	58	37	4	1	2 (d) (e)	
Reported by other executives	19	6				
Subtotal	77	43	4	1	2	127
Debt to shareholders' equity						
Reported by CEO's	46	32	1	1	2 (d) (e)	
Reported by other executives	17	5				
Subtotal	63	37	1	1	2	104
Total: debt ratios	**140**	**80**	**5**	**2**	**4**	**231**
Inventory turnover rate						
Reported by CEO's	58	20	57	27		
Reported by other executives	13	6	19	4		
	71	26	76	31		204
Net profit margin (return on sales)						
Reported by CEO's	55	35	45	26		
Reported by other executives	15	9	12	3		
	70	44	57	29		200
Days' sales in accounts receivable						
Reported by CEO's	49	18	51	22	1 (a)	
Reported by other executives	12	3	16	3	1 (a)	
	61	21	67	25	2	176
Cost of capital						
Reported by CEO's	53	65	7	1		
Reported by other executives	14	20	2			
	67	85	9	1		162

Table No. 3: (continued)

	Decision Applications (number of times mentioned)					
Financial Indicators	*Planning, Budgeting, Goal Setting*	*Evaluating Investment Proposals*	*Appraising Performance of Managers and Units*	*Awarding Incentive Compensation*	*Other*	*Total Mentions*
Earnings per share						
Reported by CEO's	46	23	8	20	1 (c)	
Reported by other executives	18	6	6	18		
	64	29	14	38	1	146
Liquidity Ratios:						
Current ratio						
Reported by CEO's	39	16	7	1	2 (a) (b)	
Reported by other executives	12	1	1		1 (a)	
Subtotal	51	17	8	1	3	80
Quick ratio						
Reported by CEO's	30	11	3		3 (a) (b)	
Reported by other executives	7	1			2 (a) (f)	
Subtotal	37	12	3		5	57
Total: liquidity ratios	**88**	**29**	**11**	**1**	**8**	**137**
Break-even point						
Reported by CEO's	43	33	22	3		
Reported by other executives	7	14	3			
	50	47	25	3		125
Dividend payout rate						
Reported by CEO's	45	8		1	4 (a) (d) (e)	
Reported by other executives	14	1			1 (a)	
	59	9		1	5	74
Book value per share						
Reported by CEO's	32	21	1	2	3 (b) (e)	
Reported by other executives	11	2				
	43	23	1	2	3	72

Explanation of "other" decision-making applications:
(a) Planning and managing cash flow.
(b) Appraisal of overall corporate performance (e.g., by the board of directors).
(c) Presentation in annual reports to shareholders.
(d) Working to improve bond rating.
(e) Financing decisions.
(f) Dividend decisions.

In addition to reporting their applications of the indicators listed above, the survey respondents volunteered information concerning their use of other quantitative measurements. The following measurements were mentioned from one to ten times each:

(1) Liquidity indicators:
Working capital as a percent of sales
Cash flow

(2) Activity indicators:
Total sales
Cost of sales
Period costs
Asset turnover rate
Ratio of assets to sales

(3) Profitability indicators:
Ratio of operating profit before taxes to sales
Profit per unit of product

Actual earnings and cash flow against budget
Discounted cash flow
Discounted payback
Profitability index

(4) Growth indicators:
Sales growth rate
Earnings growth rate
Ratio of sales of new products to total sales
Sales per employee
Market share
Resources required (manpower, R&D, organization)

(5) Other
Achievement of specific, measurable goals

above, net income is significant not only in its own right, but also as an element in the computation of various ratios.

Although the net income amount reported in a company's income statement is determined in accordance with generally accepted accounting principles, there is nothing to prevent analysts from modifying this figure when it is used for ratio analysis in the management decision-making process.

Debt ratios (231 mentions). Sometimes described as "leverage ratios," these indicators highlight the extent to which a company relies on borrowed capital. The formulations used by responding executives are:

$$\text{(1) Debt ratio} = \frac{\text{Total debt}}{\text{Total capital}}$$

$$\text{(2) Debt ratio} = \frac{\text{Total debt}}{\text{Shareholders' equity}}$$

Variations in practice exist with regard to the definitions of debt and of total capital. For example, some analysts believe that debt should include only long-term borrowing, while others broaden their definition to include short-term debt and other current liabilities. These variations, of course, affect the definition of total capital as well.

Inventory turnover rate (204 mentions). This important activity ratio measures the number of times within a fiscal period that a company's investment in inventory is recovered, or "turned over." The more frequent the turnover, the greater the profits. The general formulation is:

$$\text{Inventory turnover} = \frac{\text{Sales}}{\text{Inventory}}$$

This is the computation used for reporting turnover by Dun & Bradstreet Inc., which publishes a great deal of statistical business information. For a company that wishes to compare its turnover rate with such published statistics, this formulation should be used.

However, some analysts contend that such a computation of turnover is incorrect. They point out that inventories are recorded on the basis of cost and the numerator of the fraction should be cost of sales, rather than sales, in order to be consistent. This is yet another illustration of lack of standardization in the preparation of financial indicators. Another, less significant, variation in this computation is the number that is used for inventories. Most analysts believe that an average balance should be calculated; but there is no agreement on how refined the average should be.

Net profit margin (200 mentions). The rate of return on sales is an important indicator of a company's profitability. It is calculated, very simply, as:

$$\text{Net profit margin} = \frac{\text{Net income}}{\text{Sales}}$$

In their internal management reports, many companies prepare income statements in terms of both absolute dollars and, in an adjoining column, percentages of net sales. Net sales equals 100 percent and the other line items are expressed as percentages of net sales ending with the net profit margin. Changes in these percentages over time can be significant indicators of improvement or deterioration in a firm's profit picture.

Days' sales in accounts receivable (176 mentions). Management is continually interested in the effectiveness of the company's credit function. Just as the inventory turnover rate is important as an indicator of a firm's ability to recover its investment in inventories, so, too, is the measurement of its ability to convert receivables into cash. The number of days' sales in accounts receivable, also known as the average collection period, provides such a measurement. The smaller the number of days, the more rapidly is the firm collecting its receivables. This statistic is calculated as follows:

$$\text{Days' sales in accounts receivable} = \frac{\text{Accounts receivable}}{1/360\ \text{Sales}}$$

Cost of capital (162 mentions). One of the more esoteric financial indicators is a company's cost of capital. It has been defined as "that rate of return which [a firm's] assets must produce in order to justify raising the funds to acquire them."[5] The cost of capital is widely used as part of the process of screening capital investment proposals. In general, if a project does not promise to exceed the firm's cost of capital, it would be economically undesirable to make the investment.

In its simplest form, the cost of capital may be defined as the interest rate that a company must pay currently on any debt that it would incur to finance a project. Most analysts and financial executives, however, would not be satisfied with such a limited concept of cost of capital. Instead, they contend that the computation should be a weighted average of all of the firm's sources of long-term capital, including preferred stock, common stock, and retained earnings. This number is commonly expressed as an annual percentage.

A description of the computation of cost of capital and its conceptual foundations is beyond the scope of this report. But these subjects have been covered in other Conference Board publications (for example, Patrick J. Davey, *Corporate Capital Structures and Financing Plans: 1981-1984*. Information Bulletin No. 97, 1981) and in most corporate finance textbooks.

Earnings per share (146 mentions). The only financial indicator that has been recognized in the determination of generally accepted accounting principles is earnings per share of common stock (EPS). Its computation and reporting are covered in Accounting Principles Board Opinion No. 15, "Earnings Per Share," issued in 1969.[6] In its simplest form:

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[5] Wilbur G. Lewellen, *The Cost of Capital*. Dubuque, Iowa: Kendall-Hunt Publishing Co., 1978.

[6] Financial Accounting Standards Board. *Financial Accounting Standards, Original Pronouncements.* Stamford, Connecticut, 1982, p. 214.

$$\text{Earnings per share} = \frac{\text{Net Income}}{\text{Number of shares of common stock outstanding}}$$

However, this computation can become quite complicated when there are shares of convertible preferred stock or other convertible securities outstanding. Further complications can arise when extraordinary items of income or expense are reported in the income statement.

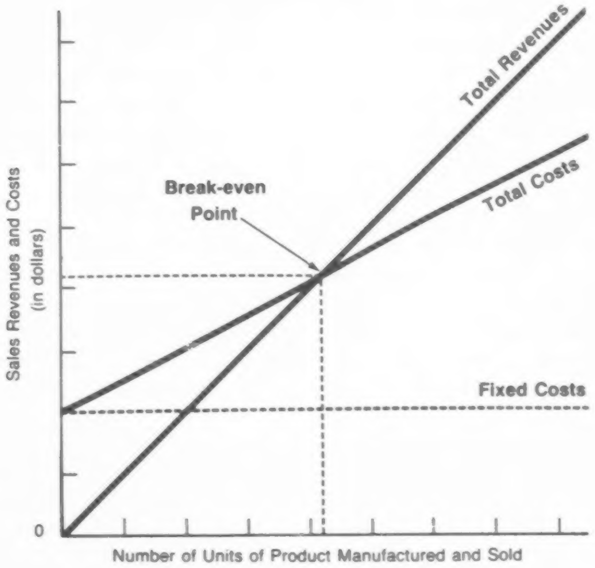
Liquidity ratios (137 mentions). The ability of a firm to meet its short-term financial obligations (its "liquidity") is a major concern of management, as well as of the company's creditors. Two types of liquidity ratios provide measurements of the firm's capabilities in this respect. The first is the current ratio (sometimes called the "working capital" ratio), which relates the firm's current assets to its current liabilities:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

The second indicator is the quick ratio (sometimes called the "acid test" ratio). It is much more stringent in that it measures a company's ability to satisfy its current liabilities only with its more liquid current assets such as cash, marketable securities, and accounts receivable. Inventories are excluded and the formulation is generally:

$$\text{Quick ratio} = \frac{\text{Current assets—inventories}}{\text{Current liabilities}}$$

Break-even point (125 mentions). A helpful form of analysis for management decision making is the determination of the so-called break-even point. This analysis studies the relationships among fixed costs, variable costs, and profits. The purpose is to determine the point at which revenue from sales will just equal total costs. This analysis is illustrated in the following chart:



Below the break-even point, the firm suffers a loss; above that point, it enjoys profits. A more detailed explanation of the computation and presentation of break-even information is available in many corporate finance text books.[7]

Dividend payout rate (74 mentions). The percentage of net income that a company distributes to its shareholders in the form of dividends is of great interest to investors. It is also a matter of concern to company executives. Many corporations strive to maintain a steady payout rate to their shareholders over time, in the belief that such reliability has a beneficial effect on the market prices of their stocks. This ratio is calculated in this way:

$$\text{Dividend payout rate} = \frac{\text{Dividend per share}}{\text{Earnings per share}}$$

Book value per share (72 mentions). The price at which a company's stock is traded in the market may have little or nothing to do with the value of each share of stock according to the company's balance sheet. The book value is calculated as follows:

$$\text{Book value} = \frac{\text{Shareholders' equity}}{\text{Number of shares of common stock outstanding}}$$

The stockholders' equity would, of course, be reduced if there were any shares of preferred stock in the hands of investors.

Comparisons of market prices with book value can be enlightening. For example, a firm whose shares sell for less than book value could be attractive as a takeover candidate because the acquirer might be able to liquidate the assets and thus realize a gain. Executives of companies in this situation may try to take defensive measures to forestall such an acquisition.

Rankings of Indicators

Despite the variety of financial indicators that are available, there are a relatively few "old standbys" that received the greatest number of votes when the surveyed executives were asked to rank the three measures that they regard as most important. Table 4 on page 12 summarizes the total number of times that these popular indicators were ranked first, second, or third by the surveyed executives. Looking only at the number of times that each indicator was ranked first in importance, return on investment (variously estimated) and absolute net earnings receive the most such mentions.

Although these summaries of rankings give a pretty good indication of how the majority of responding executives regard various financial indicators, this is not an absolute judgment. In some situations, a relatively rarely ranked indicator—such as growth rates—for example, could be

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[7] For example, J. Fred Weston and Eugene F. Brigham, 1981, p. 224.

Table No. 4: Executives' Rankings of Relative Importance of Various Financial Indicators

	Numbers of Times Ranked by Survey Respondents						
	First		*Second*		*Third*		*Total*
Types of Indicator	*CEO's*	*Others*	*CEO's*	*Others*	*CEO's*	*Others*	*Mentions*
Indicators of Return on Investment:							
Return on shareholders' equity	17	4	10	4	9	2	46
Return on net assets	1	2	1				4
Return on total assets	3	1	1	1			6
Return on total capital	14	5	15	6	1	1	42
Return on investment (unspecified)	2		2				4
Internal rate of return		1					1
Subtotal	**37**	**13**	**29**	**11**	**10**	**3**	**103**
Absolute net earnings (in $)	24	5	6	1	6	2	44
Net profit margin (return on sales)	4	1	15	2	12	4	38
Earnings per share	6	2	7	4	7	3	29
Debt ratios:							
Ratio of debt to shareholders' equity	1		3		7	5	16
Ratio of debt to total capital			4	1	5		10
Subtotal	**1**		**7**	**1**	**12**	**5**	**26**
Break-even point	*1*		*1*		*10*		*12*
Activity ratios:							
Inventory turnover rate			4		2		6
Asset turnover rate						1	1
Days' sales in accounts receivable			1		2		3
Subtotal			**5**		**4**	**1**	**10**
Cost of capital	2		1		3	1	7
Current ratio			1		4		5
Growth rates of sales and earnings	1		3	1			5
Growth of new products					2		2
Book value per share					2		2
Cash flow			1		1		2
Total capital					2		2
Achievement of specific goals			1			1	2
Sales volume					1		1
Cost of sales	1						1
Market share					1		1
Dividend payout rate					1		1
Net present value of discounted cash flow			1				1

the single most important indicator for a particular firm at a given time in its history.

Comparisons With Other Companies

Most analysts urge that to give a company's financial indicators greater meaning, they should be compared with external data: other companies' data, industry averages, and the like. This is precisely what the majority of companies taking part in this study actually do. Only 17 out of 101 respondents say that they make no such comparisons.

Companies can refer to a vast quantity of data for the purposes of business intelligence-gathering. Some of it is free for the asking (e.g., corporate annual reports and 10-K's); and other information is packaged and sold by commercial statistical services (e.g., Dun & Bradstreet, Inc.); still more is published in the popular business periodicals (e.g., *Fortune*). But, among the companies participating in this study, the most frequently consulted sources of comparative data about financial indicators are the statistical compilations offered by trade and industry associations. The following tabulation shows the frequency with which the responding executives reported their reliance on various external sources of data. Many of the executives stated that they refer to more than one such source.

External Sources of Comparative Information	*Number of times mentioned*		
	By Chief Executives	*By Other Executives*	*Total*
Trade association or industry statistics	29	6	35
Analyses of competitors prepared internally	16	8	24
Annual and quarterly shareholders' reports and 10-K reports	13	3	16
Dun & Bradstreet, Inc. Key Business Ratios	12	3	15
Standard & Poors Compustat Service, Inc.	5	4	9
Fortune "500" and "1,000" statistics	7	2	9
Forbes statistics	5	1	6
Security analysts' reports and reviews	4		4
Newspaper articles about other companies	2	1	3
Robert Morris Associates-Annual Statement studies	1	2	3

Also mentioned once or twice are: Value Line on-line database; Moody's Investors Service; Conference Board economic statistics; *Business Week* statistics; Executive Stock Report: Media General Financial Service, Inc.; PIMS (Profit Impact of Market Strategy) statistics; historical data of one's own company; and press releases issued by other companies.

Reporting Information About Financial Indicators

As one might expect, information about financial indicators is communicated within companies primarily by means of the firms' periodic financial reporting systems. Ninety-eight (all but three) respondents reported that this is the principal method for presenting such data. Unlike the financial reports that are distributed to shareholders and the public and that are prepared in accordance with the strictures imposed by generally accepted accounting principles, internal management reports can include a great deal of other data that are useful in the operations of the business but are not reported externally. (For example, see Exhibit 1 on page 14.)

Information about financial indicators is typically scattered throughout the statements and supporting schedules, in response to the preferences of the senior executives who receive the reports, and in accordance with the inventiveness of the analysts and accountants who prepare them. Exhibit 1 presents the format of a page from a quarterly management-information report used by an oil and gas producing company.

Another widely used vehicle for the internal reporting of financial indicators is a broad class of reports called "special reports and analyses." There is almost no limit to the variety and multiplicity of purposes for which such reports might be prepared. A common example is to use the material to support proposals for major expenditures. Eighty-four companies present financial indicator information in such special reports.

Seventy-nine respondents state that financial indicator information is also put before their managements in graphic form in the course of presentations made by such executives as the chief financial officer, the controller and the planning director. The majority of firms in this study use all three, or at least two out of three, of these reporting media. Only five companies have, up until now, made financial indicator information available to their executives in the form of on-line video displays.

Four chief executives add that they also receive financial indicator information in the form of:

—Reports made to them personally by other company executives;
—Reviews "in situ" with each business unit;
—Special presentations to the board of directors;
—Asking questions and "wandering around."

Inflation Adjustments

Less than half (about 42 percent) of the companies taking part in this study use inflation-adjusted data in the preparation of the financial indicators that they present in their management reporting systems.[1] Many of the companies using such inflation-adjusted data are required by generally accepted accounting principles (Financial Accounting Standards Board Statement No. 33, *Financial Reporting and Changing Prices)* to present certain information to their shareholders on the effects of inflation and, therefore, some of the groundwork has to be done in any case. At least their reported net earnings, inventories, and fixed assets on a consolidated basis, are available on an inflation-adjusted basis.

Only six of the companies using inflation-adjusted data for computing financial indicators apply such adjustments to all (or substantially all) of the ratios that they calculate. Most of these firms state that these adjusted data are used extensively in forecasting and planning. One company uses such information in pricing decisions. The participants who

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[1] Francis J. Walsh, Jr., *Reporting Information to Management Under Conditions of Inflation.* The Conference Board, Research Bulletin No. 104, 1981.

Exhibit 1: Business and Financial Indicators (an oil and gas producing company), March 31, 1983.

Corporate Debt and Equity	*Year Ended 6/30/79*	*Year Ended 6/30/80*	*Year Ended 6/30/81*	*Year Ended 6/30/82*	*Quarter Ended 9/30/82*	*Quarter Ended 12/31/82*	*Quarter Ended 3/31/83*	*Year To Date 3/31/83*
Short-term debt (due within one year)	$	$	$	$	$	$	$	$
Long-term debt (excluding debentures)	$	$	$	$	$	$	$	$
Debentures								
Redeemable Preferred Stock								
Total Debt	$	$	$	$	$	$	$	$
Stockholders' Equity (3)	$	$	$	$	$	$	$	$
→ Debt/Equity Ratio (4)								
Debt secured by oil and gas properties	$	$	$	$	$	$	$	$
→ Book net worth per share (1)	$	$	$	$	$	$	$	$
Average Daily Production (2)								
Oil (barrels)								
Gas (millions cubic feet)								
Oil equivalent (barrels)								
Change from previous year								
(Other operating statistics may also be presented.)								

(1) Common Stock outstanding
(2) Average production represents the average for period specified in column heading.
(3) Includes cumulative preferred stock
(4) The ratio equals short- and long-term debt plus debentures and redeemable preferred stock divided by stockholders' equity.

reported that they apply inflation adjustments to financial indicators usually use these adjustments only for a few key indicators, rather than for the entire spectrum.

Following are the financial indicators that the participating executives report as being subject to inflation adjustments, and the number of times each was mentioned:

Indicator	*Number of Mentions*
Return on Investment:	
Return on total assets	5
Return on total capital	4
Return on net assets or shareholders'equity	3
Return on investment (unspecified)	1
Subtotal: return on investment	13
Absolute net earnings	11
Earnings per share	4
Net profit margin (return on sales)	4
Cost of capital	3
Cost of sales or inventories	3
Growth rates	3
Dividend payout rate, inventory turnover rate, book value per share, ratio of debt to total capital, discounted cash flow	1 each

Problems and Limitations of Financial Indicators

Although the executives taking part in this study make widespread use of ratios and other financial indicators of business performance, they do not regard these quantitative yardsticks uncritically. More than half (58 out of 101) of the responding executives state that they have observed various hazards, difficulties or limitations in the use of these measurements.

May Encourage Short-term Thinking

The most frequently voiced criticism is that the indiscriminate use of, or reliance upon, financial indicators may encourage a short-term way of thinking and cause managements to overlook, or play down, longer-range considerations. As an automotive manufacturing company executive sees it: "Financial indicators that report past performance could foster short-term decision making, especially in light of reward systems which utilize the indicators as sole determinants of regular and special compensation. Due to the especially long lead times associated with capital-intensive industries, failure to recognize this tendency and to reduce its impact on the decision-making process would seriously hamper the long-term profitability—even the continued viability—of the company."

The chairman of a paper products company adds that the tendency to think in short-range terms "is not the fault of the indicators, but in how they are used." Another chief executive believes that top management needs to take steps to prevent long-run considerations from being obscured. He observes: "The short term is easier to manage and foresee. So if financial goals are set and managers will be evaluated upon them, they will tend to deal with the more certain short term. To protect the long-term interest, you have to make the more abstract longer-term goals an equal part of each evaluation."

And another board chairman places the blame on external influences for encouraging short-term thinking. He states: "Analysts and money managers compare our figures with those of the competition, and report on such comparisons without indicating whether we are spending more on long-term projects or developing new products. Financial publications also seem to stress the short-term."

Nonquantifiable Factors are Equally Important

Another limitation that is often mentioned is that financial indicators cannot and do not tell the whole story about a company and its operations. Experienced executives emphasize that many qualitative, or nonquantifiable, factors also have a strong bearing on a firm's success and its prospects. The president of a petroleum products company observes: "Financial indicators are only one indicator of performance. Full business performance must be assessed by a broad range of nonquantitative factors which range from customer satisfaction to employee productivity."

Excessive Reliance on One or Two Indicators

A number of study participants mention that it is possible to focus too much attention on only one or two financial indicators as *the* keys to decision making. At various times in the past, critics have pointed to earnings per share as a culprit in this respect because so many investors, security analysts, and the business press have given such prominence to this statistic. Several survey participants observe that all quantitative indicators have limitations, and it can be misleading to rely too much on only one or two of them.

Variations in Accounting Practices

Some responding executives warn that it is dangerous to take financial indicators at their face value, because the assumptions on which they are based may be incorrect and the accounting practices on which elements of ratios are based may not be consistent. Furthermore, the formulations on which the indicators are calculated are subject to variations, as pointed out earlier in this report.

Other Problems and Criticisms

Other caveats mentioned by several participating executives are:

—One accounting period's results are not sufficient; comparison of indicators over time is vital if one is to draw correct inferences.

—Quantification can obscure the real world. For example, financial indicators might encourage retention of obsolete production facilities.

—Indicators summarize past history and may not reflect rapidly changing conditions.

—The impact of changing prices must be understood.

—Some indicators are difficult to understand and to communicate.

—Unsophisticated users may misinterpret indicators.

—Temporary manipulation of ratios is possible.

—Too much attention to competitors' or industry averages may foster mediocrity in a firm.

Additional Readings

Financial ratios and the details of how they are calculated appear in many of the widely circulated textbooks in the fields of corporate finance, investment analysis, and accounting. A few examples are:

James C. Van Horne, *Fundamentals of Financial Management*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 4th Edition, 1980, Chapter 6, "Financial Analysis."

J. Fred Weston and Eugene F. Brigham, *Managerial Finance*. Hinsdale, Illinois: The Dryden Press, Seventh Edition, 1981, Chapter 7.

Glenn A. Welsch, Charles T. Zlatkovich, and Walter J. Harrison, Jr., *Intermediate Accounting*. Homewood, Illinois: Richard D. Irwin, Inc., Sixth Edition, 1982, Chapter 21, Part A.

Erich A. Helfert, *Techniques of Financial Analysis*. Homewood, Illinois: Richard D. Irwin, Inc., Fifth Edition, 1982.

In addition to text materials, articles relating to financial indicators and their use appear from time to time in the business press. Following are some that have attracted recent attention:

Charles A. Gibson, "How Industry Perceives Financial Ratios," *Management Accounting*, April, 1982.

Surendra S. Singhvi, "What is the Real Bottom Line?," *Management Accounting*, February, 1983.

Charles R. Turner, "Analyzing Financial Statements According to Industry Standards," *Credit & Financial Management*, March, 1983.

Michael J. Gombola and J. Edward Ketz, "Financial Ratio Patterns in Retail and Manufacturing Organizations," *Financial Management*, Summer 1983.

Robert H. Hayes and William J. Abernathy, "Managing Our Way to Economic Decline," *Harvard Business Review*, July-August, 1980.

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Research Bulletin

U.S. Regional Economies

An Updated View of 1983-1984

The Conference Board

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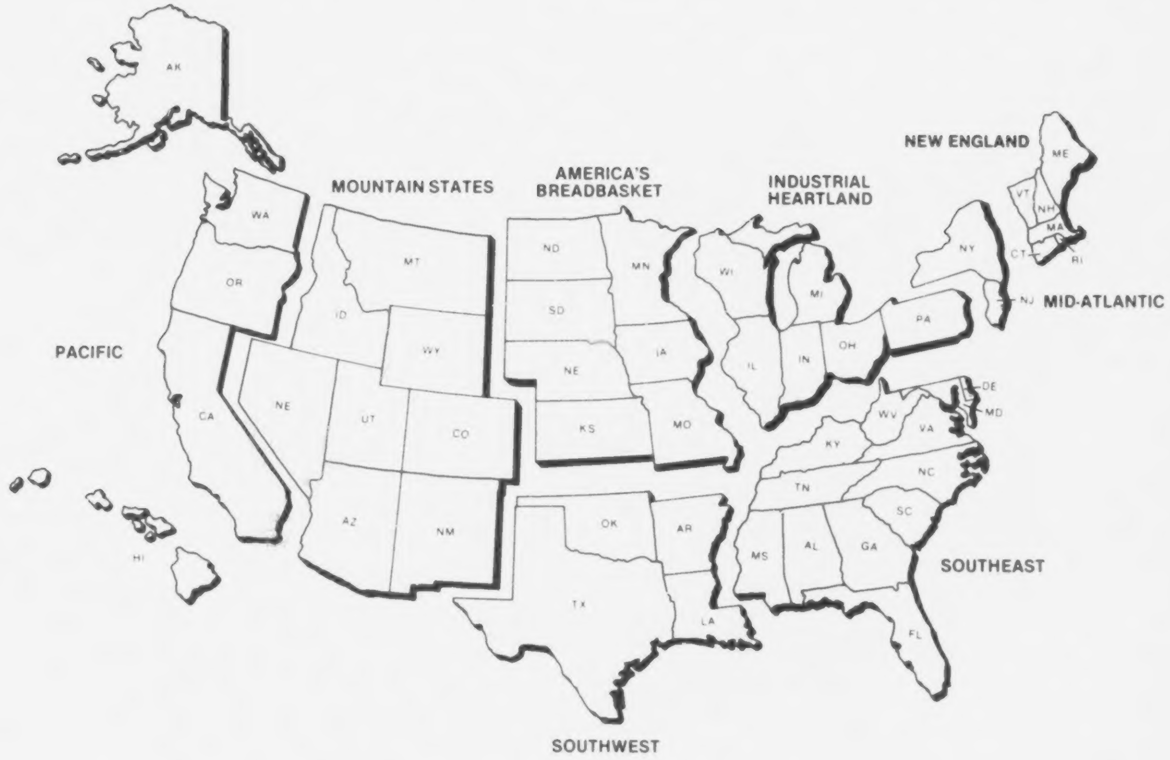
PACIFIC
MOUNTAIN STATES
AMERICA'S BREADBASKET
INDUSTRIAL HEARTLAND
NEW ENGLAND
MID-ATLANTIC
SOUTHEAST
SOUTHWEST
AK
HI
WA
OR
CA
ID
MT
WY
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The recovery in U.S. economic activity is a year old as 1983 comes to a close. Back in February, when The Conference Board's Regional Economic Forum met to assess 1983-1984 prospects, the evidence of the upturn was still quite tentative. At that meeting, as reported in Research Bulletin 137, the regional experts were confident that 1983 would be a year of economic growth, but their expectations were subdued. Not only did they expect the growth rate in 1983 to be very modest, they also expressed worry about the fragility of financial markets and about the chances of yet another round of inflation.

Late in 1983, the Forum participants updated their assessments. Their reports are presented in this Bulletin. The first year of recovery has been a good deal stronger than expected, and it has certainly touched every part of the country. The sentiments of the Forum are nevertheless not exceptionally buoyant. In part, this is because serious problems persist in agriculture and in export-dependent and import-competitive industries. Also, the recessions of the early 1980's were so deep that even a strong recovery leaves industries and regions well below their peaks. Finally, the Forum participants probably share the widespread sense of nervous uncertainty over whether the U.S. economy has escaped the dreary circle of boom and bust. Be that as it may, the reports here certainly do make more cheerful reading than those of the past several years.

Lora S. Collins
Director-Business Conditions Analysis

New England

Katharine L. Bradbury

Federal Reserve Bank of Boston

New England's recovery from the 1981-1982 recession has been more gradual than that of the United States in total. Nonagricultural employment in the nation grew 1.9 percent between the recession's trough in November, 1982, and September, 1983, while jobs in New England grew less than half as fast. In manufacturing, the contrast was more stark: New England employment in July, 1983, was 1.1 percent above November, 1982, while national manufacturing employment increased by 3.5 percent.

This flat performance partly reflects a delayed upturn in New England: Manufacturing jobs in the region continued to decline for several months after manufacturing in the nation began to recover. Then, manufacturing in New England grew 2 percent between February and September of 1983. This is not unlike the region's initial recovery from the 1975 recession, when manufacturing jobs declined for four months after the recession's trough. Autos (and related rubber and steel) and residential construction generally lead recoveries, and New England employment is less concentrated in these sectors than that of the average state.

New England's slow recovery also reflects its relatively strong performance during the recession; at the trough, total nonfarm jobs in New England were only 2 percent below the peak, while the national decline was 3 percent. Durable goods manufacturing, in particular, held up better in New England than in the country as a whole during the recession, and even after further losses during the early recovery, durables employment in New England in September, 1983, was 8 percent below the prerecession peak, compared to 9 percent for the nation. (See chart.)

NEW ENGLAND

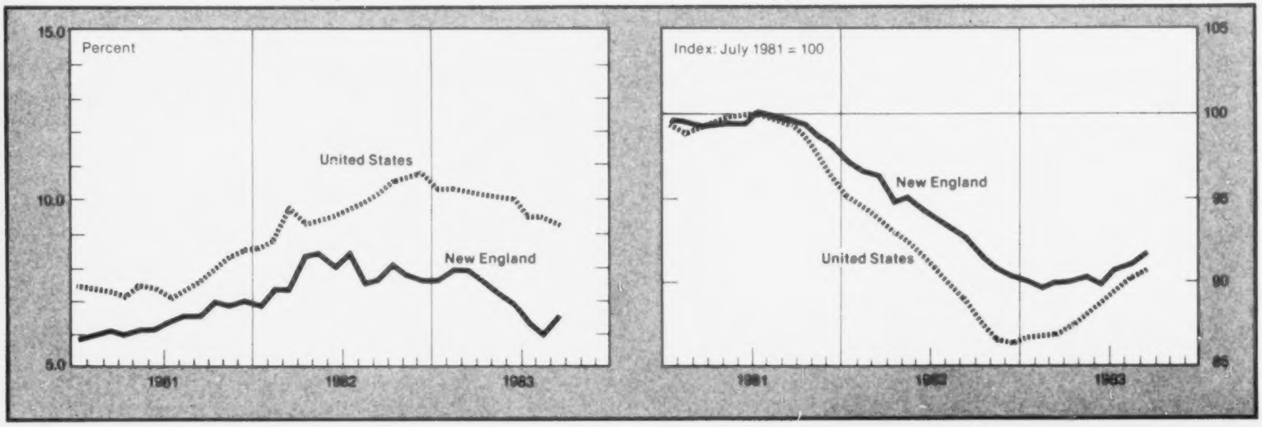
Nonmanufacturing employment has been unsteady in the region, climbing 1.5 percent from August, 1982, to February, 1983 (while national employment slid slightly), then declining while nonmanufacturing jobs elsewhere picked up in the spring quarter. The decline was mostly attributable to government and construction. As of September, 1983, nonmanufacturing employment in the region was 0.8 percent above its level at the prerecession peak, while the rise in national manufacturing growth was almost twice that.

None of the New England states has recovered as strongly as the nation, but New Hampshire was least affected by the recession, and has continued its strong growth trend into the recovery. In contrast, Rhode Island's recession employment losses, unlike those of the other New England states, were greater than the nation's; yet it has recovered in parallel with the region.

The regional picture looks brighter when one compares New England's unemployment *rates* (rather than employment growth) with the nation's. New England's rate declined 1.3 percentage points between November, 1982, and September, 1983, about the same as the national rate of improvement. But the September, 1983, rate was 6.5 percent, only slightly above the low rate New England experienced at the peak before the 1981-1982 recession. The U.S. rate—9.3 percent—was still more than 2 percentage points above its level at the prerecession peak. (See chart.) All six New England states had below-national-average unemployment rates in July.

The near-term outlook for New England is favorable for

New England and the Nation -- The Employment Picture



Unemployment Rate

Employment in Durable Goods Manufacturing

BEST AVAILABLE COPY

the same reasons that a more gradual recovery was expected for the region at the start of 1983. Specifically, New England's production is more concentrated than that of other regions in sectors which were expected to recover with a lag—capital goods and exports.

Business capital spending nationally has picked up sharply in recent months. Most forecasts suggest that steady growth will continue through 1984 and 1985. Activity in investment-related high-technology industries such as computers, communications equipment, and electronic components and instruments, as well as more traditional capital goods industries, is expected to accelerate at this stage in the business cycle. Thus, the orientation of New England manufacturing toward capital goods should pay off in increased orders and shipments now that the first year of the recovery is nearly completed.

An export recovery began in June after three lean years. Orders have been bolstered by improving conditions in Canada, the United Kingdom, and Japan, although France, Italy and Latin America remain weak. Improved European purchasing power should provide a boost to New England manufacturers. However, the strength of the dollar reduces the probability of a strong export surge, and is responsible for the sharp pickup in imports that has accompanied the recovery.

Three other factors can be expected to affect the pace of New England's recovery—defense spending, construction and government. Government employment declined more in the region than in the country as a whole during the recession and continued to fall off faster than nationally from the trough through the Summer of 1983. Massachusetts accounts for 90 percent of the region's loss of government jobs. It is not likely that New England as a whole will continue to decline faster than average, but government employment is not a strong growth sector anywhere.

Defense spending is expected to continue at a strong, steady pace; this will contribute more to economic growth in New England than in most regions. Construction is less important in New England than in the nation, with the exception of New Hampshire and Vermont. Because population growth in the region is slower than average, construction activity is disproportionately nonresidential, a sector which tends to lag the business cycle.

"The Industrial Heartland"

W.V. Bussman
TRW Inc.

The economic recovery that seems to be sweeping vigorously through the United States economy is being felt in spots in the Industrial Heartland. Industries associated with current production of automobiles have added workers to support higher production levels. Other manufacturing industries, however, have yet to experience much of a recovery.

The Cleveland SMSA presents a microcosm of the Industrial Heartland. From the first quarter of this year to the third quarter, industrial employment in the Cleveland SMSA rose by 15,400, or 1.9 percent. However, most of that increase occurred in nonmanufacturing employment, as shown in the table; manufacturing employment rose by only 1,700 persons, a 0.8 percent rise.

Within manufacturing, total employment in durables industries remained flat, while employment in nondurables industries increased. The only industries within the durables sector to record increases in employment in 1983 were primary metals and transportation equipment, mostly automobiles. Employment by rubber manufacturers also increased, reflecting the higher demand for automobiles countrywide.

The employment patterns shown in the table are fairly typical of the way the Cleveland area follows a national recovery. Gains occur early in automotive-related industries, which tend to recover early in the overall U.S. cycle. Other industries that are more tied to investment spending, such as nonelectrical and electrical machinery as well as primary metals and fabricated metal products, experience their most rapid recoveries in the second year of the national recovery. This pattern was one of the factors that made the last four years so painful for the Industrial Heartland: There was no second year to the 1981 uptick although it is formally recognized as having been a recovery.

INDUSTRIAL HEARTLAND
WI
MI
PA
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IN
OH

If the U.S. economy continues to expand for two more years or so, the Industrial Heartland will benefit. However, the previous peaks of production or employment will most likely not be approached as long as costs of production exceed the production costs in the rest of the nation and overseas by such large margins.

Unfortunately, the outlook for the Industrial Heartland becoming more competitive with the rest of the world is not bright. Labor costs are not the only determinant of

Cleveland SMSA Employment by Industry (in thousands)

			1983		
	1979	1982	Q1	Q2	Q3
Manufacturing total	276.3	224.1	210.6	211.5	212.3
Durables total	205.1	159.9	146.9	147.2	146.8
Primary metals	31.6	26.5	23.7	23.9	24.4
Fabricated metal products	45.5	34.0	32.2	31.6	31.6
Nonelectrical machinery	50.7	38.8	32.2	32.0	31.8
Electrical equipment	26.5	23.8	23.2	23.3	23.2
Transportation equipment	31.8	20.6	20.2	20.9	20.7
Nondurables total	71.2	64.2	63.7	64.4	65.5
Nonmanufacturing total	643.5	623.4	607.0	620.9	620.7

competitiveness, but they are a big factor—one that would help to restore equilibrium to production costs if they were flexible and responded to market conditions. The experience so far in this economic cycle is not very encouraging. From the average level in 1982 to the third quarter of 1983, employment in manufacturing in the Cleveland SMSA fell by 5.3 percent. During the same time, average weekly earnings in manufacturing rose by 6.6 percent while the U.S. consumer price index rose 3.8 percent.

The longer-term record is somewhat brighter. From the peak in 1979, Cleveland employment in manufacturing fell by 23.2 percent while weekly earnings rose by 27.2 percent. However, the CPI rose by 38 percent over that period, thus reducing real average weekly earnings by 7.8 percent. If this trend continues long enough and fast enough, then growth in productivity through investment and improvements in management practices may eventually reindustrialize the Industrial Heartland.

The Mid-Atlantic

Rosemary Scanlon

The Port Authority of New York & New Jersey

MID-ATLANTIC

Both New York and New Jersey showed strong signs of recovery from the 1981-1982 recession through the first nine months of 1983. The elements that have led the national recovery—construction, retail sales, and personal income—led the way in the region as well. Unemployment rates fell slightly and were considerably under national levels throughout the year, and the business services and finance industries continued to add jobs, as was the case throughout the recession.

Construction has performed exceptionally well. F.W. Dodge reports that over $11 billion in contracts were awarded in the two states in the first nine months of 1983, a 30 percent increase over the same period in 1982. This rate of increase exceeded the U.S. gain of 26 percent in the comparable period. The pace of activity was particularly strong in New Jersey, up almost 53 percent, led by a surge in both residential and office construction, and in New York City, where contracts increased by 38 percent, with awards for infrastructure and office building exceptionally strong.

Retail sales in both states increased by 9 percent in the first nine months, exceeding the national increase of 8.6 percent. Sales of durable goods were up almost 18 percent, parallel to the national trend.

While overall employment levels in the region have yet to move ahead of 1982 averages, unemployment rates have eased somewhat during the year. In New Jersey, the unemployment rate averaged 8 percent in the first ten months of 1983, but had fallen to 6.8 percent by October, compared to 8.9 percent average in 1982; in New York State, increases in unemployment during the spring months kept the 10-month average at 8.8 percent, although the rate had eased to 8.0 by October. In both states, the unemployment rate remained well under the national level throughout the recession and early recovery period.

The New York City-northern New Jersey Metropolitan Area economy has figured significantly in the economic recovery pattern of the two states. New York City has been particularly resilient, with a strong office building and leasing market, rising hotel-room occupancy rates, an 11 percent increase in air passengers, and sturdy retail activity.

By early 1984, both states should begin to see advances in employment levels, stronger gains in personal income, as well as continued decline in unemployment rates. Finance, business services, telecommunications and aviation, together with continued expansion in foreign investment, are all strong sectors in leading the Mid-Atlantic economy throughout 1984.

Economic Indicators—Percent Change from 1982 to Comparable Period of 1983

	New York (state)	*New Jersey*	*United States*
Construction awards (9 months)	18.6	52.7	26.0
Retail sales (9 months)	9.4	7.5	8.5
Wages & salaries (9 months)	−0.7	−0.1	−0.4
Unemployment rate (10 month average)	8.8	8.0	9.8

The Southeast

Donald L. Koch

Federal Reserve Bank of Atlanta

The Southeast is poised to enter a new stage of expansion as 1984 begins, maintaining the momentum developed since the region's economy began a strong upturn during the first half of 1983. The revival in residential construction, evident as 1982 drew to a close, stimulated construction-related industries as anticipated and the region's substantial furniture and carpet manufacturing industries began to expand output rapidly to meet the renewed demand. As encouraging signs of recovery nationwide began to awaken the long-awaited burst in consumer spending, sales of autos and textiles showed brisk growth. The recovery quickly spread to the Southeast's heavy concentrations of automobile parts and apparel manufacturers. Total employment began to grow again during the late Spring after remaining nearly flat through 1982.

After 1983 ends, the recovery appears to be gathering strength. Employment is showing relatively strong growth and the unemployment rate is declining, although Alabama, Louisiana and Mississippi—states hardest hit by the recession—are still experiencing rates in the vicinity of 12 percent. The average rate for the region has fallen from near 11 percent at the beginning of the year to near 9 percent during the fourth quarter. A second year of economic expansion nationally promises significant declines in the unemployment rate in the Southeast in 1984.

In Georgia and Florida, where economic activity is brisk, unemployment already has fallen to near 7.0 and 8.0 percent, respectively. The mix of service-related industries in the economies of these two states gave them a buffer against the high unemployment that characterized the manufacturing-dominated economies of neighboring states. The manufacturing economies of Alabama, Mississippi and Tennessee are also beginning to experience healthy employment gains in response to the progress of the national recovery. Louisiana's economy remains heavily dependent on the petroleum industry and international trade, both of which have been slow to recover.

SOUTHEAST
DE
MD
WV
VA
KY
NC
TN
SC
MS
AL
GA
FL

The strongest rebounds in the Southeast in 1984 should occur in areas that produce goods for consumers and for national defense. Defense spending will boost activity at numerous defense installations in the region, but the areas producing sophisticated defense hardware, particularly in Florida, will benefit most. Strongly positive demographic pressures should boost spending on housing and consumer durables, and employment in the service industries, in Florida and Georgia, as these states benefit from an increased flow of in-migrants in 1984.

Other parts of the Southeast will benefit from emerging strength in business investment. Alabama, Louisiana, Mississippi and Tennessee will benefit from plant reopenings in diverse durable goods manufacturing industries and increased mining activities. Tennessee will also continue to benefit from Japanese investments in an automobile assembly plant and related manufacturing activities in

Smyrna, south of Nashville. If the national economy sustains its strong first-year advance in the second year of recovery, Alabama, Louisiana, Mississippi and Tennessee could show sharp gains in employment, extending a healthy growth pace to virtually all states in the region in 1984.

There are some important lingering trouble spots. The international trade and energy sectors are lagging other sectors of economic activity in recovery. A strong dollar and world recession reduced trade flows through most of 1983, including the flow of agricultural and energy products at major ports in the region. The speed of economic recovery in the United States and elsewhere in the world should help shape the strength of recovery of important coal, phosphate, pulp and paper, and chemical exports, as well as imports of oil and machinery into the United States. If the foreign-exchange value of the dollar drops in 1984 in response to the widening U.S. merchandise trade deficit, manufactured U.S. exports will grow slowly, but steadily, over the year, adding to the increased trade flow caused by world economic growth.

A severe drought across most of the region in 1983 left farmers with limited means of repaying the heavy indebtedness that had accumulated during the several years of adversity stretching back to 1977. The government's Payment-In-Kind (PIK) program assisted the farmers who chose to participate; it was the few who idled all of their acreage who were helped most as they were able to sell the cost-free commodities received from government storage at prices inflated by the supply-reducing effects of the drought and the PIK program. But the majority of producers were not covered and they watched their income prospects shrivel with the searing heat and dry weather. Livestock producers were also harmed by the sharp price increases in feed grains attributable to both PIK and the drought. The businesses that sell to farmers and purchase their products have sustained severe adverse impacts not only from the drought but also from the acreage retirement program that drastically cut business volume all across the farm belt.

For the survivors, conditions look brighter in 1984. Farmers are likely to resume full-scale plantings and merchants should realize a resurgence in demands for their products. Demand for farm products must also increase, though, if farmers are to escape another low-income disaster as bumper crops move to market. A large prospective citrus crop is already depressing orange prices from year-ago levels. Continued national economic recovery and favorable international trade developments should increase agricultural exports and provide helpful demand strength for farm products.

A continuation of national economic recovery in 1984 should boost other areas of economic activity in the region as well. The airline, tourism and convention businesses, important throughout the region, should grow sharply as the expansion proceeds. With the gain of convention facilities in Atlanta, the continued lure of Disney's new EPCOT center in Florida, and the run of the 1984 World's Fair in New Orleans, 1984 could be a banner year for southeastern hospitality industries. The World's Fair, in particular, should boost tourism in Louisiana as well as in neighboring states. The major cloud on the tourism horizon is the slowdown in the flow of tourists from Latin America in response to economic problems there.

Clearly, the economic outlook for the Southeast is positive. Plants should continue reopening and the job picture should continue to improve, assuming that consumer and business spending continues to fuel the national recovery. Virtually all economic sectors show promise for the new year despite continued high unemployment and other lingering woes from the recession in hard-hit Alabama, Louisiana, and Mississippi. Florida's economic growth appears likely to pace the region over the new year, but the benefits of revived growth should be widespread across the southeastern states.

"America's Breadbasket"

J. Dawson Ahalt

U.S. Department of Agriculture

One year ago, a bleak demand picture dominated the farm outlook. While global economic recovery from the 1980 recession appeared far off, mounting U.S. stocks of unsold commodities threatened to prolong entrenched low prices and income for U.S. farmers.

Events of the past year have substantially altered the situation. Despite prospects for continued weakness in foreign demand, striking adjustments in U.S. crop supplies have boosted 1983 prices and aggregate farm income, and they point to further increases in 1984.

AMERICA'S BREADBASKET

Responding to the Payment-In-Kind program, farmers reduced plantings of PIK crops and soybeans by 15 percent. Spring crop conditions were good, and winter wheat farmers realized record yields and large production. But Summer brought severe drought to the Southeast and Midwest, reducing yields sharply. With fewer acres planted and yields reduced by drought, 1983 U.S. output of feed grains, oilseeds and cotton plummeted to between one-third and one-half, and crop prices advanced briskly. Wheat prices, although above a year earlier, remained unsatisfactorily low. For all of 1983, crop prices are likely to average 6 to 8% above 1982. Higher prices are offset by lower marketing volume, thus cash receipts are a little below the 1982 level.

Prices of livestock, unlike those of crops, weakened during the year. The drought disrupted production patterns and added to marketings. With lower prices, but larger meat, poultry and milk production, aggregate 1983 livestock receipts may be near the 1982 level.

While total 1983 farm cash receipts may be below the 1982 level, farm production expenses are down, too. Reduced plantings and little inflation in input costs caused expenses to go down for the first time in 30 years. These factors, coupled with large government payments in cash and kind—about $9 billion—generated record net cash farm income of $42 to $44 billion. (Net farm income, which includes inventory changes and noncash income, rose from $22 billion in 1982 to an estimated $24 to $26 billion in 1983.)

The impact of 1983 events on each farmer or rural area depended on a host of factors. Farmers who participated in the PIK program, took out crop insurance, or had high yields are likely to have fared better than others. In drought regions, crop and livestock producers, as well as local economies, were very hard pressed. For farm input manufacturers and dealers, reduced plantings and the drought meant smaller sales. On the output side, smaller crops cut down the volume of business for processing and exporting industries.

Perhaps the most significant result is just beginning to occur: Burdensome crop stocks will be worked down to much more manageable levels over the next year. These changes will not reduce world food and fiber supplies unduly, because foreign production rose to record levels in 1983. But global supplies will be more closely aligned with consumption, especially as economic recovery begins to stimulate farm product demand. During the first half of 1984, U.S. farmers' crop prices are expected to run above year-earlier levels. With stocks for most commodities declining, farm programs announced for 1984 provide less incentive to reduce production than last year. Thus, farmers are expected to bring back into production much of the cropland idled in 1983.

Assuming normal weather, crop production could rebound in 1984, increasing marketings in the second half of the year and adding somewhat to cash receipts. Increased spending for farm inputs and replacement of machinery favor recovery for farm input industries. Higher average livestock prices and receipts are likely. Price improvement is likely to come in the second half of the year. During the first half, livestock marketings will remain large as livestock and dairy producers cull their herds. Then, smaller marketings from trimmed herds and stronger consumer demand are expected to boost prices.

On balance, prospects suggest that while smaller government payments and higher production expenses could trim 1984 net cash income, net farm income could increase again, especially with a large positive change in farmers' inventories. This positive income forecast, coupled with slower growth in farm debt in 1983 and 1984, may help ease some of the financial problems that highly leveraged farmers have been facing. Meanwhile, farmers and other rural Americans should benefit from an expanding job market and a continuing moderate level of inflation.

One aspect of the farm outlook is likely to remain problematical for at least another year. After dropping by a tenth in the past year, the value of U.S. farm exports is forecast to recover in the year ahead because of high prices for farm commodities. However, the export volume is expected to decline—for the fourth consecutive year. Our exports face daunting problems. Foreign economic recovery seriously lags our own. Many importing nations are hobbled by huge debt problems. Record foreign harvests in 1983 have reduced trade needs, and the strong U.S. dollar makes our exports less competitive.

Supply adjustments made during 1983 should help U.S. agriculture to weather this period. However, the cost of adjustment for both farmers and taxpayers has been high, and to a large degree has been borne unilaterally by the United States. This situation is stirring growing debate over appropriate policies for domestic agriculture and international trade in the long run.

The Southwest

Bernard L. Weinstein

John Gray Institute, Lamar University

As 1983 draws to a close, the southwestern region appears to be out of step with the national economy. Over the past year, with the end of the recession, the national unemployment rate has dropped from 10.2 percent to 9.3 percent. In contrast, each of the four southwestern states has recorded an increase.

The Southwest, which had been booming for nearly a decade prior to the recession, is still reeling from lower

Unemployment Rates

	September 1982	*September 1983*
Texas	8.0%	8.5%
Oklahoma	6.5	7.5
Arkansas	8.9	9.1
Louisiana	11.2	11.6
United States	10.2	9.3

energy prices, Mexican peso devaluations, and farm problems. Although onshore exploration and drilling have picked up somewhat in recent months, huge inventories of rigs, pipe and other oilfield equipment remain unused. Offshore drilling is still in the doldrums, and dozens of jackup rigs sit moored in coastal estuaries. Throughput at refineries and petrochemical plants along the Gulf Coast is well below capacity, and continued downsizing and automation have resulted in thousands of permanent layoffs. As a consequence of oil patch woes, every Gulf Coast metropolitan area from Brownsville to New Orleans, with the exception of Lafayette, is currently posting double-digit unemployment rates. Barring an unforeseen new spike in oil and gas prices, the Gulf Coast crescent will be slow to recover from its present malaise.

The vicissitudes of the Mexican economy continue to wreak havoc along the southwestern border. In fact, Laredo at 26.4 percent and McAllen at 25.1 percent have the unenviable distinction of recording the highest unemployment rates in the nation. Here again, little improvement can be expected unless the Mexican economy recovers and the problem of illegal aliens is resolved.

The agricultural outlook for the high plains of Texas and Oklahoma also remains cloudy. By 1982, real farm income had dropped to 60 percent of its 1979 level. Positive developments during 1983 included lower energy costs, declining interest rates, and the federal Payment-in-Kind (PIK) program. On the negative side, however, drought and flooding severely reduced crop yields in both the high plains and the coastal farming areas. Lack of rainfall and forage also forced the early slaughter of West Texas cattle herds.

The region's bright spot is clearly the I-35 corridor stretching from Oklahoma City to San Antonio. Often referred to as "Silicon Gulch," this strip encompasses some of the fastest-growing and healthiest metropolitan areas in the nation. For example, at 5.6 percent, Dallas-Fort Worth can boast the lowest unemployment rate of any major metropolitan area in the nation. Bryan-College Station and Austin have consistently recorded the lowest unemployment rates among all metropolitan areas nationwide. The I-35 corridor should do extremely well during 1984 as high-tech manufacturing expands and defense procurement rises. Twenty-five percent of the nation's housing starts in 1984 are expected to be in the state of Texas, with 15 percent in the Dallas-Fort Worth area alone.

The Mountains

Lucy Black Creighton

First Interstate Bank of Denver

Responses of the Mountain states to the national recovery are a mixed bag. In some, the same lower inflation and interest rates that spurred housing, auto and other consumer expenditures at the national level have also led to increased economic activity at the state level. These states should continue to exceed the national average in employment and income growth in 1984. In other states, where population is small and resource development is an important part of the economy, lower oil prices and a slow recovery in copper, coal and uranium, as well as in agriculture, will depress economic activity for another year.

MOUNTAIN STATES

MT
ID
WY
NV
UT
CO
AZ
NM

Colorado and Arizona began showing increases in employment early in 1983 and, by September, employment had topped prerecession highs. Unemployment rates have fallen significantly, with Arizona down from 11 percent in September, 1982, to 7.9 percent in September, 1983; and Colorado down from 7.9 to 5.9 percent. Loss of jobs in mining— especially copper for Arizona and oil and gas for Colorado—has been compensated for by growing employment in construction, manufacturing, trade and the ser-

The Mountain States: A Mixed Bag

	Nonagricultural wage and salary employment— percent change September, 1982 to September, 1983	*Housing permits— percent change, first 9 months, 1982, to first 9 months, 1983*
Nevada	3.3%	46%
Arizona	3.0	99
Colorado	2.9	67
New Mexico	2.0	48
Idaho	1.9	99
Utah	1.4	79
Wyoming	−1.1	5
Montana	−1.4	96
United States	1.7	71

vices. Through the first nine months of 1983, housing permits totaled 47,400 in Arizona and 37,000 in Colorado, increases of 99 and 67 percent, respectively, over the same period in 1982.

For both Arizona and Colorado, manufacturing employment, especially in electronics and other high-tech industries, is an important growth element which should gain in strength as the national recovery proceeds. Furthermore, the same increases in consumer confidence that have pushed household spending at the national level will energize household spending and trade and service employment at the state level. In 1984, employment growth in these states should average 4 to 5 percent. Although Denver's office-space market is still very soft, the Denver and Phoenix areas will both show considerable gains in total nonresidential construction.

Nevada has been a star performer. With tourism an important part of overall economic activity, rising consumer confidence means increased spending and employment. And Idaho, with its dependence on national demand for food, lumber and wood products, also has responded rather directly to the national upturn in retail sales and in housing. In Idaho, employment has been rising since early in 1983 and unemployment has fallen below 6 percent. Such gains should be sustained through 1984. For both Nevada and Idaho, hefty increases in housing have led to sizable growth of construction employment and increases in retail sales.

In spite of continuing losses of employment in petroleum and other mining activities in New Mexico, construction and tourism are helping the state achieve what appear to be the early stages of economic recovery. Through mid-1983, statewide housing permits showed the highest six-month level since 1979, and trade and the services are responding to increased levels of spending by out-of-state tourists. Although manufacturing is only a small part of the New Mexico economy, there are signs that the situation is changing, and in 1982 a small sector of technology-based manufacturing firms bucked the recession to show an increase of 800 jobs. Federal military and space operations are also an increasingly important source of economic growth for the state. The outlook for 1984 is for employment growth of 3 to 4 percent.

Neither Montana nor Wyoming has experienced much of the national recovery. Hurt by layoffs in coal and copper and by the downturn in oil and gas activity, nonagricultural employment in September was below year-earlier levels in both states. Although the national housing recovery has added several thousand jobs in the state's lumber industry, Montana's mining industry has been in increasingly difficult straits. Since 1980, Anaconda had been steadily reducing employment at its large copper mine and smelter in Butte; and, in June 1983, it suspended all remaining operations. With agriculture only marginally stronger, the state's economy will make only modest gains in 1983 and 1984.

Nearly 16 percent of Wyoming's total employment is in mining, including petroleum and gas, and the state has been hard hit by the downturn in oil, coal and uranium. Wyoming's unemployment rate, once the lowest in the nation, rose from a 1982 average of 4.4 percent to a high of 10.9 percent in March, 1983. With energy and mining expected to show little change over the next six to twelve months, the state's economic situation is likely to see only small improvement in 1984.

In Utah, the lagged effect of layoffs in coal, copper and the oil and gas industry restrained employment growth in early 1983. But in the second half of the year, substantial employment gains were achieved in construction, primary metals, and building materials. As a result, the employment rate fell to 5.9 percent in September, 1983, from 7.4 percent the previous September. Employment growth should move to 3 to 3.5 percent in 1984.

The Pacific

Larry J. Kimbell
UCLA

The rate of personal income growth from the second quarter of 1982 to the same quarter of 1983 was close to the national gain in Oregon and Washington, slightly ahead in Hawaii and California, and significantly faster in Alaska. (See table.)

Alaska continues to show dramatic employment gains—far greater than the other states in the Pacific region. Nonagricultural employment grew 9.7 percent from August, 1982, to the same month in 1983. The national gain was only 0.6 percent for this period. Nonfarm employment grew at a rate close to the national gain in California and Washington, and significantly more slowly in Hawaii and Oregon.

The national unemployment rate was 8.8 percent in September, 1983 (not seasonally adjusted), higher than in any Pacific region state except Washington. The unemployment rate in Hawaii was exceptionally low at 6.2 percent.

The national recovery in homebuilding has stimulated sharp gains in lumber employment, as we predicted last year. Lumber and wood producers added 12.6 and 13.6 percent to payrolls in California and Oregon between August, 1982, and the same month in 1983. Washington lumbering industry posted a gain of 6.5 percent in employment over this period, significantly slower than the national gain in that industry of 16.4 percent.

One major industry in Washington and California did not recover through September, 1983, namely, aircraft and parts. California employment in this key industry was 136,600 persons, 1.3 percent fewer than a year earlier. The drop in Washington was a far more severe 15.4 percent. The most recent employment peak for the industry in Washington occurred in January, 1981, at 81,500 jobs. By September, 1983, employment had dropped to 61,700. These developments are somewhat surprising, given the major increases in defense procurement. The drop in commercial aircraft production has more than offset any boom in defense contracting. Airlines are still struggling with deregulation and the price cutting that destroyed profitability for most major trunk carriers. Therefore, this industry is not expected to turn around significantly until 1985, when the overhang of used jumbo jetliners will be worked down to more manageable proportions.

AK
WA
OR
PACIFIC
CA
HI

Alaska continues to be a world apart from the other states in the region. From August, 1982, to the same month in 1983, employment grew 33.2 percent in construction, 16.3 percent in trade, and 13 percent in services. Mining employment, which includes petroleum extraction, fell 11.2 percent during this period, a hint that the boom in Alaska may not continue at such exceptional rates of growth.

California will grow slightly faster than the nation as a whole in 1984. Nonagricultural employment will increase 4.3 percent in California in 1984, 0.4 faster than in the

Recent Evidence on the Pacific Region

	United States	*Alaska*	*California*	*Hawaii*	*Oregon*	*Washington*
Personal income- percent change, Q-2, 1982 to Q-3, 1983	5.9	8.3	6.8	6.4	5.7	5.8
Unemployment rate (%) September, 1983	8.8	7.6	8.3	6.2	8.6	9.5
Employment change (%)						
August, 1982 to August, 1983						
Total nonfarm	0.6	9.7	0.5	-0.8	-1.0	0.7
Durables manufacturing	0.6	n.a.	-0.9	-8.1	1.6	-7.0
Lumber and wood	16.4	n.a.	12.6	n.a.	13.6	6.5

country as a whole. Personal income will rise 11.2 percent in California, almost 2 percent faster than predicted for the United States generally. A shakeout in the home computer industry has been under way in 1983, but this phase should be over by late 1984. Once commercial aircraft orders stabilize, employment in the aircraft and parts industry will rise, boosted by higher defense procurement as well.

In Washington, durable goods manufacturing will resume growth in 1984, after a severe decline in 1983. The relatively high rate of unemployment in Washington will, therefore, be brought in line with the 8.2 percent rate expected for the nation in 1984.

Next year will be another good year for homebuilders. Lumbering activity in Oregon will rise in 1984, although by not nearly as much as the 13.6 percent gain recorded during 1983. However, beyond 1984 prospects are not so sanguine. Large federal deficits, the need to discipline money growth, and rising private credit demands could threaten another credit crunch by 1985.

If airlines ever stabilize their prices at higher levels, one casualty could be tourism in Hawaii—a clear winner from the intense competition. This does not look likely in 1984. Rising real incomes will boost this highly income-elastic sector and help turn around Hawaiian employment. Personal income will grow 9.3 percent in 1984 in Hawaii.

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Hiring Teens for Summer Work

by Nathan Weber

The Conference Board

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NEWLY AVAILABLE tax credits, plus further corporate experience, are said to be responsible for advances in summer youth-employment programs administered by private-sector coalitions in 14 major cities during 1983. Two measures of success—an increase in the number of youths hired, and a gain in the number of corporations participating—were reported by almost all of the programs.

Such improvements, however, are relative only to the experience of the same or similar programs during the previous Summer, 1982.[1] In terms of impact on overall youth unemployment, most of the private-sector programs made no more headway than the government operations that preceded them. (All private-sector coalitions reported on in this survey include participation by local government or social agencies.)

Continued advances in youth hires can be anticipated for the coming Summer, according to program administrators, primarily because the factors that accounted for the gains last Summer are still in evidence. They include earlier planning and more experience, leading to a greater degree of professionalism; a federal tax credit that results in substantial savings for employers; a high level of enthusiasm among project staffs; and continued growth in the economy.

Significant gains for the Summer of 1983 were reported in seven cities: Cleveland, which increased youth placements eight-fold over the 1982 season; Chicago, which more than tripled its placements; Miami and Baltimore, which both obtained more than twice the year-before number of jobs; Houston, San Francisco, and Boston. Only Detroit, a city that continues to reel under the severe economic declines of the past decade, reported no increase in hires. Nevertheless, about 400 Detroit youths were given jobs, the same number as in 1982. Their pay was funded through private industry contributions.

The New York City project again placed the highest number of youths: 19,798, an increase of 4,000 over the previous Summer. Houston again placed the second highest, over 5,000, which also represents a sizable increase. The results of 1982 and 1983 for all 14 cities are compared in the table on page 4.

Youth Unemployment

Notwithstanding these successes, the youth unemployment picture in the 14 cities and on the national level remained bleak, with rates significantly greater than those of the adult labor force. As determined by the U.S. Bureau of Labor Statistics, youth unemployment in the nation for August, 1983, was 23 percent, virtually unchanged since August, 1982. For black youths, the rate rose during the year to a startling 53 percent.

Youth unemployment in the 14 cities ranged from a low of 18.5 percent in Seattle to a high of 44.6 percent in Chicago. These citywide figures—the latest available—are for 1982.

Both the citywide and the national unemployment figures, as developed by the Bureau of Labor Statistics, tend to *understate* the actual situation. The Federal Government does not include, as "officially unemployed," those who have given up seeking work after a long period of fruitless job searches. Nor does it define as youths those who are over 19—whereas job programs accommodate people up to the age of 21. Furthermore, the unemployment figure for some of the cities pertains not to the city alone, but to the Standard Metropolitan Statistical Area (SMSA), which encompasses suburbs. Suburbs generally comprise a much higher number of white youths, whose unemployment rate tends to be one-half that of minority youths—thus diluting the center city statistics.

New Developments

Several developments affected the private-sector summer youth-employment picture in 1983:

On the national level, they included the Job Training Partnership Act, for which operations were being put into place even prior to the Act's effective date of October 1, 1983; and the Targeted Jobs Tax Credit (TJTC), which enabled employers to deduct 85 percent of the summer salaries they paid for certain youths.

On a local project level, developments included earlier planning, with many of the coordinators beginning activities a full year in advance; greater participation of top management, small business, and community groups; special grants

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[1] See Leonard Lund and Nathan Weber, *Summer Youth Employment: The Corporate Experience*, The Conference Board, Research Bulletin No. 141, 1983.

Private Summer Employment Programs Placed More Youths in 1983

	Youth Unemployment[1]		Job Goals		Placements		Private-Sector Placements		Public-Service Placements		Corporate Participants	
	1981	1982	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983
Baltimore	21,000 (21.6%)	21,000 (24.7%)	1,000	2,000	1,740	3,780	800	2,400	940	1,380	350	1,506[d]
Boston*	17,000 (14.2%)	23,000 (21.3%)	750	1,000	852	1,181	852	1,008	0	173[a]	152	242
Chicago	34,000 (36.1%)	36,000 (44.6%)	None	None	730	2,591	700	1,410	30	1,181[b]	45	113
Cleveland*	14,000 (20.6%)	14,000 (21.3%)	None	1,000	125	1,007	0	505	125	502	24	111
Detroit*	50,000 (25.9%)	63,000 (31.6%)	None	None	400	400	0	008	400	392	16	5
Houston	8,000 (13.0%)	17,000 (28.8%)	5,100	3,000	3,000	5,000	3,000	5,000	0	0	N.A.	3,500
Los Angeles*	56,000 (22.0%)	52,000 (22.6%)	8,500	7,500	6,940	7,436	6,900	7,429	0	7	2,000	2,000
Miami*	9,000 (17.8%)	17,000 (30.2%)	None	None	940	2,010	940	2,000	0	10	60	125
New York City	46,000 (31.2%)	42,000 (31.0%)	15,000	16,000	15,789	19,798	15,789	19,698	0	100[c]	1,500	2,000
Omaha[2]	5,219 (14.1%)	5,056 (18.9%)	None	None	310	370	310	369	0	0	10	133
Pittsburgh	17,000 (20.8%)	15,000 (20.3%)	None	None	210	215	0	0	210	215	25	53
Richmond	N.A.	N.A.	1,500	1,500	1,086	1,177	815	815	271	362	300	300
San Francisco*	23,000 (18.6%)	24,000 (21.7%)	None	1,000	806	1,262	800	1,215	6	11	650	800 +
Seattle*[3]	15,000 (23.6%)	11,000 (18.5%)	250	1,015	276	2,604	0	0	276	2,604	20	30

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[1] Unless otherwise indicated, unemployment figures are from U.S. Bureau of Labor Statistics, *Geographic Profile of Employment and Unemployment*, 1981 and 1982 editions, U.S. Government Printing Office.

*Standard Metropolitan Statistical Area. Where no asterisk appears, the figures are for the central city.

[2] Projections by Nebraska Department of Labor. ("1982" figures are projections for July, 1984.) Percentage figures are averages for two age groups: 16-17 year olds and 18-19 year olds.

[3] 1983 figures for goals, placements and participants represent a total of three separate public programs now administered by the Private Industry Council. The 1982 figures apply to one of those programs, funded and jointly operated by a single corporation.

[a] Includes 94 youths working in small businesses.
[b] Includes 300 youths with community groups, 100 in corporate training programs, and 781 in work-study cooperative projects.
[c] Placed in small and minority-owned businesses.
[d] Includes corporations that made donations as well as providing jobs. 1982 figure refers only to corporations providing jobs.

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and innovations by a number of oil companies; and the growing use of the youths themselves in project operations.

Job Training Partnership Act

The Job Training Partnership Act (JTPA), which replaces the Comprehensive Employment and Training Act (CETA), did not become effective until October 1, 1983, but preliminary activities were set in motion up to a year earlier, as the CETA projects were being phased out.

Essentially, the JTPA eliminates almost all funding for public works jobs and for the living expenses of trainees. It replaces a single federal administration with 57 state and territorial apparatuses, and funds on-the-job training—as opposed to actual employment—for lower-income individuals. Income limits have been tightened, reducing the number of eligible applicants.

Under JTPA's Title I, each governor is authorized to establish a State Job Training Coordinating Council to administer the program. Councils, in turn, will recommend designation of Service Delivery Areas (SDA's), or geographic sections of the state, to receive training funds. An SDA, in effect, will be any municipality or other governmental unit—or group of units—with a population of at least 200,000. Under CETA, localities needed a population of only 100,000 to qualify.

Within each SDA, local elected officials will appoint Private Industry Councils (PIC's) to establish policy and monitor the localized program. Actually, many PIC's were created as far back as 1978 under a CETA amendment. Although their aim then was to obtain permanent jobs in private industry and train unemployed workers to fill them, they often performed a largely advisory function.

Under the new Act, PIC's are granted considerably more authority, in effect assuming responsibility formerly exercised by the municipal agencies and other sponsors that operated CETA programs. A majority of PIC membership, as well as the chairman, must be representative of business and industry, with the remaining membership reflecting the points of view of education, organized labor, community groups, economic development agencies, rehabilitation services, and the public employment service.

Title II of the JTPA pertains to the training programs, of which 90 percent will be geared to the economically disadvantaged, and 10 percent to others facing serious employment barriers. This title also provides funding for a separate Summer Youth Employment and Training Program. One innovation here is that 14- and 15-year-olds may be accepted into summer projects, where appropriate, and that "supportive services"—undefined in the Act—may be established for these youths.

Other titles authorize training for dislocated workers; continuation of federal programs for Native Americans, migrant farm workers, and veterans; amendments to the 1933 Wagner-Peyser Act (which established the network of public employment services); and amendments to the Social Security Act's Work Incentive Program.

How successful the newly empowered PIC's will be is open to question. According to the National Alliance of Business (NAB), a group that lobbied for passage of the JTPA and that has long supported private-sector leadership of job programs, several factors have combined to hamper a smooth transition from CETA to JTPA. Chief among these factors is the sheer complexity of transferring administrative authority from one national center to 57 state centers. Other problems include delays in designating Service Delivery Areas; a number of natural disasters on the state level occurring at the same time state JTPA operations were to be established; and the inexperience of newly appointed PIC members. Success of the PIC's and of the Act itself, according to the NAB, will depend on "how involved and committed the partners really are."[2]

Targeted Jobs Tax Credit

Liberalization of the Targeted Jobs Tax Credit (TJTC) has made hiring youths for summer positions much more attractive to private employers, according to several project administrators. In 1983, for the first time, companies received a credit of 85 percent of the first $3,000 paid to low-income 16- or 17-year-old youths hired for 90 days during the Summer. Employers utilizing the credit might receive a net tax benefit of over 70 percent, depending on the firm's tax bracket. (See box on page 6.)

For the first three quarters of fiscal 1983, according to the U.S. Department of Labor, over 164,000 youths were certified for employers wishing to take advantage of the TJTC. Although figures for the total population of youths who could qualify were not available as of this writing, it is likely that the previous low utilization rate is being reversed. (According to a study prepared by the General Accounting Office, only about five percent of disadvantaged youths eligible for the tax credit program were hired between 1980 and 1982.)[3]

In a highly innovative use of the TJTC, one major oil company was able to employ six times as many youths as it had planned to, without increasing its budget. (See below for details.)

Earlier Planning, Greater Professionalism

After the Summer of 1982, most of the private sector coordinators reached by The Conference Board announced efforts to begin planning immediately for the following year. In part, early planning was necessary to prepare for the JTPA; in part, this reflected a high degree of enthusiasm among the staff in virtually every city.

Earlier planning included professionalizing some of the projects.

In Chicago, for example, coordinators hired paid staff for 1983; the previous summer's program was staffed by volunteers. One result: a tripling of youths employed in that city.

Coordinators for projects in Omaha and New York City both reported improvements in matching applicants to jobs, another reflection of earlier planning.

Elsewhere, plans to professionalize operations included participation in seminars and consultations with the New York City project, which remains the largest such undertaking in the nation. Year-round planning now seems to be the norm.

Increased Participation

Corporate management, small business, and community groups all increased their involvement in 1983, according to administrators.

In Miami (Florida), for example, the Chief Executive Officer of Ryder Corporation and the Vice-President of WTVJ-TV, co-chaired the project.

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[2] "JTPA: Where Do We Go From Here?", *Work-America*, National Alliance of Business, Washington, D.C.: October, 1983, p. 4.

[3] United States General Accounting Office, *The Targeted Jobs Tax Credit Program* (PAD-83-44), Table 7. Washington, D.C., June 8, 1983.

How the Tax Credit Works

Case: 40 hours a week for 11 weeks, at $3.35 an hour

	46% Tax Bracket	25% Tax Bracket	15% Tax Bracket
Wage expense	$1,474	$1,474	$1,474
85% credit	(1,253)	(1,253)	(1,253)
	221	221	221
Employment taxes[1]	144	144	144
	365	365	365
Reduction (federal)	(168)	(91)	(55)
Final cost per employee	197	274	310
Cost per hour	.45	.62	.70

[1] FICA and unemployment compensation will vary by state and company.

Prepared by Standard Oil Company (Indiana)

The Los Angeles program considered its "most notable improvement" to be the increased involvement of many CEO's, a direct result of the leadership of First Interstate Bankcorp's Chairman of the Board.

Boston's project was said to have received a significant boost when the Chairman of the First National Bank of Boston sent out an appeal for jobs on his own stationery.

In Chicago, Illinois Bell management agreed to pay for word-processing facilities used by the summer employees. (All the 1982 summer "graduates" of Illinois Bell are now reported to be employed full time in other word-processing jobs.)

Even in Pittsburgh, which still had to depend on subsidized public-service jobs, corporate involvement more than doubled over the previous Summer, in large part due to the efforts of the Chairman of National Intergroup, who also served as Chairman of the Pittsburgh-Allegheny PIC.

Religious institutions, YMCA's and other community groups also agreed to increased participation in many areas. Aside from volunteering staff, community groups placed youths, salaried through corporate contributions, on public-service projects such as cleaning and restoring vacant lots, and performing home repairs for senior citizens. With salaries subsidized through donations, small businesses, too, took on youths as employees.

Government agencies on the local, state and county level continued to play an important role, often providing the means by which youths were referred to jobs. Cooperation by a mayor or county executive most often took the form of presiding over the opening breakfast for corporate employers, and of issuing video announcements and press releases.

Oil Company Innovations

Through a creative use of the Targeted Jobs Tax Credit by Standard Oil Company (Indiana), 124 youths were employed in Chicago at full salary on a budget originally scheduled for only 24 youths. The oil company asked the Internal Revenue Service if it could avail itself of the special tax credits by paying the salaries of youths who would then perform work for not-for-profit agencies and Amoco service station lessees. The IRS agreed, with one stipulation. Amoco service stations were all acceptable because they were related to Standard's business, but the agencies participating had to provide business training jobs related to work skills typically utilized by the company. Consequently, 50 youths were placed with Amoco service stations and another 50 with social-service agencies. (The original 24 worked in Standard's central office.)

"We call this technique the 'Multiplier for Jobs,' " explained Standard's manager of employee relations. "We were able to hire six times as many kids without increasing the expenditure budgeted. The service stations and the community groups, meanwhile, received labor that they didn't have to pay for. Our only requirement from those groups was that the youths obtain real work-related skills. That includes everything from pumping gas to word processing."

The executive noted, however, that the IRS ruling applied *only* to Standard Oil of Indiana. However, a General

Revenue Ruling is anticipated in 1984 which will permit other companies to follow Standard's approach. Standard Oil has prepared a videotape which explains the broader Chicago program as well as the use of the special tax credit.[4]

Other oil companies participated through special donations. Mobil provided a major grant by which 250 youths were placed in nonprofit jobs in Chicago. Chevron's grant enabled the Miami project to hire a professional administrator. Gulf contributed $50,000 and technical assistance to each of the projects in Atlanta, Pittsburgh, Philadelphia, New Orleans, and Houston.

Youth Activities

While the primary interest of young people in the summer employment process is to secure a job, several coordinators also engaged youths in the actual operation of the project.[5] In New York City, two youths served as project co-chairmen while numerous others staged almost daily walkathons (under supervision), soliciting jobs for themselves from stores and other establishments along commercial strips. "The aim was to help them with self-confidence," explained the Philip Morris executive who oversaw the summer project for the New York City Partnership. Youths were also featured heavily in the project's advertisements, which were directed as much to the teenage population as to employers. "I believe that youths should be advocates for their peers," this executive said.

The Seattle program, which combined three separate public-service projects under the supervision of the Seattle-Kings County Private Industry Council, enabled 30 youths to create their own "companies" which, in fact, realized profits. Under the Youth Enterprise Self-Employment Project, teenagers received training in the basics of entrepreneurialism, and then created their own mini-service firms—washing cars, making deliveries, and so forth.

In San Francisco, job seekers participated in publicity efforts through the annual paint-in, a spray-can competition in which the young artists vied for jobs in corporate art departments by creating their own posters. All posters were shown on buses, television and in other public spaces.

Elements of the Program

Most of the projects incorporated a number of similar elements, tailored to the circumstances of their respective cities. Often one or more of the elements was funded, or sponsored, by a single company of foundation.

- *"Kick-off" breakfast,* primarily for major business employers. The purpose of these affairs, usually held in early Spring and presided over by the mayor, is to formally announce the project, explain new developments (such as the Targeted Jobs Tax Credit), and secure job pledges.
- *Massive mailing to prospective employers,* usually consisting of appeals for jobs by a recognized corporate leader or head of a business coalition, such as the National Alliance of Business or the Chamber of Commerce. In some instances, letters accompany utility and credit-card bills.
- *Phonathons,* staffed by corporate and community volunteers, or employees from the state employment service. The aim, again, is to solicit jobs, money and other forms of cooperation from the private sector.
- *Hot line,* a single telephone number for everybody to call for information—youths, companies, reporters, community groups, and so on. This is the number that will be placed on every piece of publicity throughout the campaign, including letters, posters, bumper stickers, electronic sign announcements, press releases, and television commercials.
- *School connections.* Increasingly summer jobs are being used to accomplish a secondary goal: Improvement of academic performance. Jobs are often promised first to students who show improvement in attendance and grades. On the other hand, many employers, recognizing the difficulties faced by out-of-school youths, target at least some of their efforts to this group.
- *Slogan.* Projects often develop a slogan to reinforce the youth-employment message as often and as memorably as possible. The slogan in Miami was "Let's Show Our Kids How America Works." Los Angeles used "First Break: Give a Kid a Job."
- *Media coverage.* An extensive press campaign usually accompanies every phase of the project, as the role of the media is considered essential to success. Often a public relations or advertising firm will take responsibility for publicity on a pro bono basis.

Program administrators stressed repeatedly that the effectiveness of each of these elements, and of the youth-employment project as a whole, depends primarily on one factor: increased involvement by private companies. "The fact is that anyone can participate," explained the administrator of the New York project. "From the *Fortune* 500 to the neighborhood deli."

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[4] For information on the videotape, contact Chicago United, 6 North Michigan Avenue, Chicago, Illinois 60602.

[5] Under CETA, prime sponsors were legally required to establish a youth council, or to include youths in an overall planning council. This is not required under JTPA.

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Pay & Performance:
The Interaction of Compensation & Performance Appraisal

by Charles Peck

The Conference Board

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Introduction

Since the time of the early Puritan settlers, it has been part of the American work ethic that effort should—and will—be rewarded. The pay-for-performance concept that employees should be monetarily rewarded for conscientious effort has been somewhat battered over the passage of time by such opposing forces as egalitarianism. However, it remains the cornerstone of U.S. corporate compensation philosophy.

The pragmatic argument for this philosophy is twofold: First, differences in performance can be discerned; and, second, superior performance is reinforced by pay increases. Corporate belief in the importance of individual performance as a determinant of pay increases was documented in a 1981 Conference Board study in which almost 95 percent of the companies surveyed rated it the most important factor in determining exempt and executive pay increases, and practically 90 percent said it was the most important factor in pay raises for nonexempt salaried employees.[1]

Opposing the notion of performance-based pay is the idea of egalitarianism. Egalitarianism emerged from the eighteenth century antimonarchical concepts of Condorcet and Rousseau, and was exemplified by Jeffersonian democracy. Thus its philosophical and historical roots are also venerable.

In the U.S. business arena, the egalitarian standard is carried chiefly by unions, which negotiate with management for pay increases covering whole groups of employees, largely irrespective of individual, or even group, performance. The contention of organized labor is that performance-based pay systems are too prone to abuse and can easily become vehicles for favoritism and "rate busting."

As a result, most corporations focus their pay-for-performance effort on exempt employees, since hourly wage increases are usually either collectively negotiated or, in nonunion establishments, follow the pattern of jointly bargained agreements. This leaves exempt exployees: a very heterogeneous group embracing supervisors, scientific and professional employees, sales representatives, administrative personnel, managers and top executives. In fact, one problem in applying the pay-for-performance concept to exempt employees is posed by the difficulty in measuring the performance of some of these subgroups.

An exception to this general practice is the use of productivity incentives by some firms. However, the incidence of these plans does not seem to be widespread.[2] Nonexempt salaried employees occupy a middle ground. The performance factor in their pay raises tends to be more diluted than in the case of exempt employees' increases by considerations such as economic changes, the influence of collectively bargained agreements, and the effect (up to a point) of seniority on performance, which makes salary increases, in effect if not in fact, "step-rate" pay progression.

Production engineers have long been able to measure the output of direct labor in relation to its cost. With respect to nonexempt salaried employees, such as clerical workers, there has been progress, particularly in the insurance and banking industries, in the development of measured clerical work standards similar to those used for production employees. The performance of certain segments of the exempt group lends itself to reasonably concrete measurement. For example, the productivity of a first-line production supervisor's unit is assumed to correlate with his or her performance as a supervisor. The sales volume generated by field sales representatives is a direct measure of their performance. In the case of top executives, it has long been assumed that their performance can be directly related to corporate profitability, and thus measurable in terms of the balance sheet. This assumption underlies the annual top-executive bonus plan. However, it is very difficult to correlate the performance of administrative, staff and professional exempt employees with quantifiable results. Their value as employees—and thus their performance—can often only be related to the intangible "management of the organization."

This study concentrates on pay for performance for exempt employees in general, excluding field sales representatives and, largely, top executives. Both of these groups were considered in prior reports.[3]

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[1] Charles A. Peck, *Compensating Salaried Employees During Inflation: General vs. Merit Increases.* The Conference Board, Report No. 796, 1981.

[2] For a study of productivity incentive plans, see *Productivity Sharing Programs: Can They Contribute to Productivity Improvement?* Washington, D.C.: U.S. General Accounting Office, March 3, 1981.

[3] Charles A. Peck, *Compensating Field Sales Representatives.* The Conference Board, Report No. 828, 1982. Harland Fox, *Top Executive Bonus Plans.* The Conference Board, Report No. 760, 1979; *Executive Incentives: Long Term Performance Share/Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983; *Executive Incentives: Incentive Stock Option Plans.* The Conference Board, Research Bulletin No. 148, 1983.

Table 1: Numbers of U.S. and Exempt Employees, by Industry Category

	Total U.S. Employees			Exempt Employees		
		Middle 50 Percent Range			Middle 50 Percent Range	
Industry Category	*Median*	*Low*	*High*	*Median*	*Low*	*High*
Manufacturing	9,600	3,220	26,000	2,120	800	6,000
Banking	1,240	640	2,550	360	160	690
Insurance	1,300	770	4,200	450	240	1,490
Diversified finance	3,850	1,770	9,600	1,100	550	3,670

Methodology

The data for this study were obtained through a mailed questionnaire sent, in most cases, to compensation executives in a cross section of manufacturing companies, banks, insurance companies, and diversified financial institutions. After the survey results had been analyzed, a participative research seminar was held, attended by a small number of survey participants who discussed, clarified and amplified these results. In a few cases, additional information was obtained (or existing information was clarified) by telephone interviews. Questionnaires were received from 557 companies distributed among the four industry categories as follows:

Industry Category	*Number of Companies*
Manufacturing	302
Banking	145
Insurance	95
Diversified finance	15
Total	557

Table 1 shows the total number of U.S. employees and the number of exempt employees for each industry category. Table 2 gives information on financial size for each of the four groups.

Pay for Performance

This section summarizes some views in favor of pay for performance, examines its importance as a compensation objective, and gives an indication of perceived success or failure in achieving it.

Pay-for-Performance Advocates

The proponents of pay for performance are found mostly in those organizations either attempting it or at least saying they are attempting it. Endorsements of pay for performance often appear in corporate policy statements of pay-policy objectives. The extent of corporate belief in pay for performance was indicated by a survey conducted by the employee benefit and compensation consulting firm, William M. Mercer, Inc., in which chief executive officers in 63 percent of 305 companies surveyed said their company's pay and benefits policies were designed to reinforce corporate values, of which performance was the most highly prized.[1] Pay for performance recently received a boost from the White House, when the Administration proposed regulations for the first time tying pay increases to performance for 1.4 million federal civilian workers.[2]

Following are some typical references to pay-for-performance philosophy from company policy statements:

> "Individual compensation is to be based on the individual's contribution to the success of the company. The salary system will be internally fair and externally competitive, rewarding outstanding job performance based upon objective measures agreed to in advance between the individual employee and his (or her) superior. Appraisal of individual job performance is to be determined by a formal, objective system clearly understood by all employees and which will, to the greatest extent possible, identify individual progress with company success."
>
> —*An Insurance Company*

> "Rewarding individual employees is a vital part of effective performance management. Employees must know that rewards will come in proportion to the level of performance on the job. This knowledge helps assure people that the system is both fair and responsive to their efforts. In addition, consistent recognition and rewards for performance are among the manager's most powerful motivational tools."
>
> —*A Bank*

> "Merit increases within a salary grade range should be granted only in recognition of meritorious performance. They should not come as a matter of course, and should be planned and scheduled in such a manner as to avoid

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[1] William M. Mercer, Inc., Reported in *Industrial Relations News*, October 22, 1983.

[2] Reported in *The New York Times*, October 25, 1983.

Table 2: Company Size, 1982, by Various Financial Criteria

		Size (millions)		
			Middle 50 Percent Range	
Industry Category	Criterion	Median	Low	High
Manufacturing	Sales volume	$1,027	$371	$3,255
Banking	Total deposits	1,043	632	2,578
Insurance	Total premium income	256	142	1,057
Diversified finance	Total income	1,003	244	2,337

any connotation of being an economic adjustment or annual raise. Increases should be proposed when performance and productivity clearly indicate that payment in a higher area of the range is warranted."

—A Cosmetics Company

"Current salaries and the salary progress of employees should reflect their performance. An effective salary-administration program requires that differences in performance among employees with similar responsibilities reflect differences in salaries paid. This means that employees who perform their assigned tasks in a superior manner can expect to receive salary increases that are above average. Likewise, employees who are fair-to-poor performers can expect to receive average salary increases or none at all. Continued below-satisfactory performance will lead to either delayed or reduced salary adjustments."

—A Toy Manufacturing Company

Research by Professors Richard E. Kopelman and Leon Reinharth of Baruch College (City University of New York) supports the effectiveness of pay for performance as a motivation for salaried employees.[3] Based on a study of approximately 1,000 white-collar employees in the branch offices of a financial enterprise, research results were highly supportive of the hypotheses that the stronger the performance-reward tie, the higher the level of subsequent performance, and that an expanded range of possible merit salary increases yields a higher level of overall performance.

Pay for Performance as a Compensation Objective

There are a number of possible compensation program objectives including: paying for performance; paying competitively; establishing and maintaining equitable internal pay relationships; controlling payroll costs; providing fair and consistent methods for pay increase opportunities; and recognizing and adjusting for economic changes. A number of companies have formally stated the objectives of their pay systems, very often in employee-communication documents on compensation and performance appraisal. Two typical statements of compensation objectives follow:

"With thousands of employees working at hundreds of different kinds of jobs, we must have a systematic way to make sure that employees are paid fairly and that salary dollars are spent wisely. That's why we have a salary administration program. It's designed to analyze jobs, research salary information, and provide supervisors with guidelines for making sound salary decisions.

"The goals of our salary program are to: attract qualified people; motivate employees to improve their performance and to do their best work; reward high levels of job performance; and maintain payroll costs at competitive levels.

"To accomplish these goals, salary ranges are established for all jobs to be competitive in the appropriate job market. Your pay within the salary range for your job is based primarily on your individual performance."

—A Bank

"The main goal of our pay program is to help attract, motivate and retain the most competent people available. To do this, the program has to meet several objectives. It must: establish pay levels that accurately reflect the relationships between different positions in the company; make sure overall pay levels are competitive with those of other leading companies; assure that individual pay levels reflect individual contributions; provide a method for granting increases that is consistent throughout the company; and stimulate the best efforts of each employee."

—A Diversified Manufacturing Company

The survey participants were asked to select from a list of compensation-program objectives the ones they considered "very important." Table 3 (on page 6) shows the frequency with which the various objectives were rated "very important" by the entire sample. Separate industry categories are not shown, since there was little variation from all-company data.

There is no doubt about the importance of paying for performance as a compensation objective in the minds of the survey respondents. Eighty-six percent (477) of the 557 companies in the entire sample rated it as a very important objective of their compensation programs, with approximately the same proportion of each industry category doing so.

Maintaining equitable relationships among jobs was rated "very important" with the second most frequency, mentioned by 54 percent (298) of all the companies. This same relationship held true for all industry groups except for banking, where "providing a consistent method for granting pay increases" was the second most highly rated objective.

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[3] Richard E. Kopelman and Leon Reinharth, "Research Results: The Effect of Merit-Pay Practices on White Collar Performance." *Compensation Review,* Fourth Quarter, 1982.

The objective *least frequently* designated "very important" was adjusting for economic changes. In spite of this, however, a question does exist about the immunity of exempt compensation systems from economic influences. Data indicate that when inflation is high, the size of exempt pay increases tends to rise after a lag of about one year. For example, in 1977 through 1979, median exempt merit increases, according to a Conference Board study, were 8 percent each year.[4] The Consumer Price Index for the same period showed a pattern of increases culminating in a 13.3 percent rise in 1979 over 1978.[5]

In 1980, a check by The Conference Board of a selected sample of companies showed an average exempt merit increase of 9 percent. In addition, a number of cost-of-living-adjustment (COLA), "other" and one-time general increases in response to inflation caused the 1980 total average increase to rise to 11 percent.

In the present environment, marked by a comparatively low rate of inflation, merit increases are remaining correspondingly low. The American Compensation Association reports a 1984 projected merit increase for exempt employees of 6.6 percent.[6] The conclusion is inescapable that while economic adjustments may not be an important *stated* objective of most corporate compensation programs, the state of the economy has implications for the validity of pay for performance, particularly in times of high inflation.

Where Pay for Performance Is Not a Compensation Objective

Six companies said that pay for performance was *not* a stated objective of their compensation programs. However, none of these companies flatly expressed disbelief in the concept of pay for performance or said that the results would not be worth the effort.

Five of the six reported that they had no formal program for achieving pay for performance but did believe in the concept. Two of the five, both diversified financial companies, indicated that, in the past, their industry tended to take an informal approach to compensation and performance appraisal. One said, however, that it was currently in the process of developing a formal system. The other said it would consider a formal system as the number of employees increased. The third company, a bank, said that while it had no formal system, it believed in paying for performance and relied on the judgment of its managers to differentiate pay increases on the basis of performance. The fourth company was a manufacturer, responding in terms of its headquarters location. It said that because of high diversification and a small corporate exempt staff, it had no formal corporate pay-for-performance system. The respondent implied, however, that the company tried to achieve pay for performance on an informal basis. The fifth, also a manufacturing company, merely stated that it had not officially defined its compensation goals. Based on the complete survey form, however, it appeared that it also tried informally to achieve pay for performance.

Table 3: Importance of Objectives of Corporate Compensation Programs

Objective	*Number of Companies Rating Objective "Very Important"*[1]
Pay for performance	447
Maintain equitable relationships among jobs	298
Provide consistent method for granting increases	268
Keep payroll costs competitive	198
Ability to hire	183
Adjust for economic changes	53

[1] 557 companies responding; multiple answers.

The sixth respondent, an insurance company, came closest to having an alternative to paying for performance: "Because the bulk of the salary increase has been on a cost-of-living basis and top people are hired at very competitive salaries, and a high uniform level of productivity is demanded, there is little performance distinction made among the top 95 percent of employees."

Successes and Failures of Pay-for-Performance Systems

Survey respondents were asked to evaluate the effort to pay for performance. Table 4 shows the results.

Of the 521 companies answering the question, 82 percent (429) thought their effort to pay for performance had been successful to at least some degree. In terms of the four industry categories, the highest perception of success was shown in the very small sample of diversified finance companies, and the lowest in manufacturing.

In order to make a distinction among the successful programs, companies were asked to specify the degree of success achieved. Table 5 shows the survey participants' estimation of their degree of success.

The majority of respondents (55 percent overall) reported moderate success, with the specific industries ranging from 54 percent (manufacturing) to 62 percent (insurance). More reported very successful programs (26 percent overall) than reported marginal success (9 percent overall).

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[4] Peck, Report No. 796, 1981.

[5] Bureau of Labor Statistics, U.S. Department of Labor.

[6] *1983-1984 Salary Budget Survey,* The American Compensation Association, Scottsdale, Ariz. October, 1983.

Table 4: Success of Pay for Performance, by Industry Category

	Rating of Pay for Performance					
	Successful		*Not Successful*		*Cannot Tell*	
Industry Category	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Manufacturing (N = 284)	224	79%	54	19%	6	2%
Banking (N = 140)	119	85	18	13	3	2
Insurance (N = 86)	76	88	10	12	—	—
Diversified finance (N = 11)	10	91	1	9	—	—
Total (N = 521)	429	82%	83	16%	9	2%

Table 5: Degree of Success of Pay for Performance, by Industry Category

	Degree of Success							
	Very Successful		*Moderately Successful*		*Marginally Successful*		*Cannot Tell Degree of Success*	
Industry Category	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Manufacturing (N = 193)	50	26%[a]	105	54%	18	9%	20	10%
Banking (N = 96)	27	28[a]	50	52	9	9	10	10
Insurance (N = 65)	14	22[a]	40	62	7	11	4	6
Diversified finance (N = 9)	3	33	5	56	—	—	1	11
Total (N = 363)	94	26%	200	55%	34	9%	35	10%

[a]Percentages do not add to 100 because of rounding.

On the other side, Table 4 shows that 16 percent (83) of the 521 companies responding said their programs had failed. Manufacturers reported the most failures and diversified financial companies the fewest. The last section of this study compares in detail the two extremes: systems perceived as successful and those viewed as unsuccessful.

Criticisms of Pay for Performance

The major views critical of pay for performance are summarized in this section along with an indication of how employees feel about the subject.

The Critics

There is no lack of criticism of the present state of pay for performance. Much of this centers on the way organizations attempt to achieve it through salary increases, especially in regard to the performance appraisal process, which is the basis for most exempt salary actions in the formal pay systems.

However, Herbert H. Meyer, former Manager of Personnel Research at General Electric and presently an academic, has criticized reward theory—the whole basis of corporate compensation systems.[1] Meyer believes that to the extent pay is directly attached to the performance of a task, intrinsic interest in the task itself declines. When pay becomes the important goal, the individual's interest tends to focus on it rather than on the performance of the task. Meyer uses the example of parents who fall into the trap of paying their children to do chores they should be expected to do in any case.

Meyer further contends that merit-pay plans can pose a threat to employees' self-esteem. In his research on the performance appraisal process at General Electric, Meyer asked professional and managerial personnel to rate their own performance in comparison with that of others on a percentile scale ranging from 100 (if they believed they were performing better than anyone else in a similar job at a similar salary level) to 0 (if they believed their performance was worse than that of all their peers). The middle rating, 50, represented average performance.

The average self-rating was at the 77th percentile on the scale; and over 90 percent rated themselves above average. When the supervisors of these employees were asked to rate the same people on the same scale, the average rating was at the 66th percentile. When the two sets of ratings were compared, 85 percent of the employees had been rated lower by their managers than they rated themselves.

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[1] Herbert H. Meyer, "The Pay-for-Performance Dilemma." *Organizational Dynamics,* Winter, 1975.

Meyer's implication is that since employees tend to rate their own performance higher than do their supervisors, they are always going to believe their merit increases do not reflect their true worth as employees. Their perceptions of themselves as above-average performers may be at the root of most of the problems with merit-pay plans, according to Meyer, since the majority of employees will always be dissatisfied with their pay raises.

The reaction by employees to this threat to their self-esteem posed by the appraisal process is not, Meyer says, an increased effort to improve performance in order to get a bigger increase next time. Instead, he cites such negative reactions as trying to get the performance standards lowered; downgrading the importance of the activity, which shows up in tardiness, absenteeism and decreased productivity; and disparaging the source of the threat to self-esteem by questionning the competence of the supervisor. In this connection, Meyer's research shows that the majority of employees expressed more unfavorable opinions of their supervisors after a performance appraisal and salary review than did before.

Finally, Meyer believes pay-for-performance plans foster an unhealthy competition among employees, since they must vie against each other for a limited budget of salary-increase dollars. The resulting win-or-lose situation produces such reactions as: Competitors are seen as enemies and hostility develops; perception of one's self becomes distorted positively, while perception of competitors is negatively distorted; and interaction and communication decrease to the detriment of the organization's goals.

The late Douglas McGregor, who was Sloan Professor at the Sloan School of Management, MIT, long since raised unanswered questions about the criteria for measuring the individual employee's performance.[2] According to him, such criteria are made the basis for overly fine distinctions among individuals. For example, one employee gets a 3 percent salary increase, another 6 percent, and a third 10 percent. It is most likely that the probable error of measurement of performance is several times the magnitude of the differentials being made. Further, McGregor held that the use of such comparatively small reward increments is not especially effective as a motivator.

In a similar vein, Nathan Winstanley, former Compensation Research Manager at Xerox and presently a consultant and academic, believes that assigning ratings to any more than three performance categories is asking managers to make finer distinctions than they can (or will) do.[3] According to Winstanley, managers can at the most identify only the two performance extremes in any employee group—the most outstanding and the worst—with the remainder falling into a middle category of "competent."

Winstanley criticizes the performance appraisal process, which functions as the basis for determining the amount of salary increase. He sees a number of nonperformance factors influencing appraisal results. These nonperformance factors include:

Purpose: Most performance-appraisal systems are multipurpose, with significantly different aims included. For example, ratings for salary-increase purposes as against ratings for assessing employee-development needs.

Current salary: Those with salaries above the midpoint of the range tend to receive higher ratings than those below midpoint, even though the contribution of experience to performance decreases sharply after time on the same job.

Feedback: When appraisals must be discussed with subordinates, the ratings are higher than when supervisor-subordinate discussion is not required.

Hierarchical status: Managers and top executives are rated higher than nonmanagement exempt employees. The argument advanced for this is that only the best performers get promoted. However, the counter-argument is that this assumes an excellent (not merely good or adequate) selection process. It also ignores the fact that higher-level positions are much more difficult to perform satisfactorily and should produce the same distribution of ratings as do lower-level positions.

Function: There are significant differences in ratings among functions in many companies. For example, the financial function may rate itself higher than does the manufacturing function.

Sex and race: Both research and the courts have found rating differences between sexes and among races not justifiable by valid performance differences.

Length of service: Performance tends to be rated higher as length of service increases.

Personal characteristics: The personalities of the rater and ratee, and/or the interaction between the two, can have a significant effect on the appraisal results.

Edward E. Lawler, Professor of Organizational Behavior and Director of the Center for Effective Organizations at the University of Southern California, believes that while nearly all companies claim to use merit pay systems, most of these have failed because employees are unable to see a direct relationship between their performance and their pay.[4] According to Lawler, this perceived lack of connection arises from (1) inadequate measures of performance; (2) poor communications where pay practices are either kept secret or communicated improperly; (3) poor pay-delivery systems where the procedures are so complex that the relationship between pay and performance is obscured; and (4) poor managerial behavior, often manifested in the failure to recommend significantly different amounts of pay where large performance differences in fact exist among subordinates.

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[2] Douglas McGregor, *The Human Side of Enterprise.* New York: McGraw-Hill Book Company, 1960.

[3] Nathan B. Winstanley, "How Accurate Are Performance Appraisals?" *Personnel Administrator,* August, 1980.

[4] Edward E. Lawler, "Merit Pay: Fact or Fiction? *Management Review,* April, 1981.

However, Lawler does see a few bright spots on the pay-for-performance horizon. For instance, employees continue to believe that people should be paid for performance—whether or not they believe it is actually being done. Also, the increasing sophistication of management information systems could be a positive force in relating pay to performance. Further, the trend toward decentralization has resulted in the creation of smaller business units, which makes it easier to relate individual performance to pay. Finally, there is a movement among companies to become more open and participative about their pay systems.

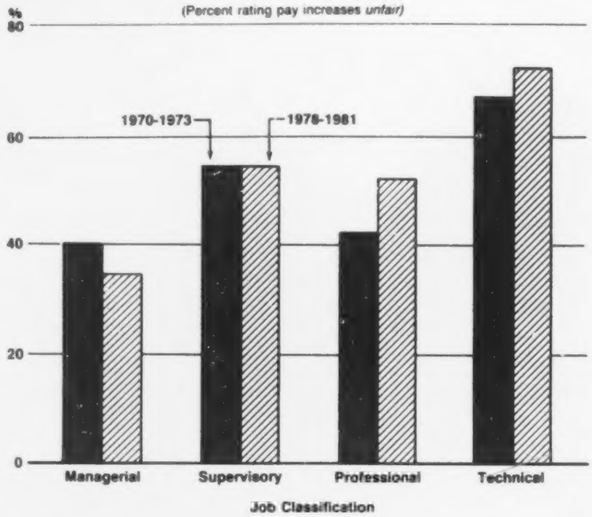
Employee Perceptions and Attitudes

Research has confirmed the impression of many that employees attach considerable importance to their pay. The Opinion Research Corporation tracked this over 20 years and found that, of 14 different job factors, pay was rated most important by employees. This held true for all job categories, both sexes, and all age groups except the under-30 group.[5]

Given the significance employees attach to their pay, what is their attitude toward pay for performance? Opinion Research has drawn information relative to this from its data bank of over 250,000 responses, covering different levels of employees in various types of industries. These findings indicate that, over time, the majority of employees surveyed about their perception of a link between performance and pay increases saw little connection between *effort* and subsequent pay raises. Among managers, supervisors and sales representatives, over 50 percent said effort and excellent performance would result in pay increases. However, this view was held by only one-third of professional and clerical employees and only one-quarter of hourly employees. Further, over time, the majority of employees surveyed said compensation systems were unfair in awarding increases and also in establishing pay differentials among jobs. This opinion was held by over 70 percent of technical employees, over 50 percent of supervisory and professional employees, and even by one-third of managerial employees, as shown in Exhibit 1.

Exhibit 1:

Fairness Ratings of Pay Increases by Job Classification



Source: Opinion Research Corporation

The Two Parts of the Pay-for-Performance System

Pay for performance results from the interaction of two separate systems: the compensation and the performance-appraisal programs. In each case, pay for performance is one goal of the system, but not its sole objective.

With respect to the corporate-compensation program, in addition to paying for performance, one other purpose is to reflect the rates paid for similar positions in the labor market in order to be competitive with companies of like size, industry and/or geographical location. Another aim is to establish proper horizontal and vertical relationships among jobs within the organization, with positions of similar scope and responsibility receiving similar pay. A third objective is to provide a fair, logical and consistent salary-administration process by which the relationships among positions are maintained and employees have equal opportunities for salary advancement. A final purpose is to reflect both the financial results of the corporation in the past fiscal year and the prospects for the forthcoming period in the size of the funds budgeted for salary increases.

The performance-appraisal process, usually within the same plan, also has multiple objectives, one of which is pay for performance. (The possibility of conflicting objectives in the same plan, as raised by Nathan Winstanley, will be discussed below.) Other than determining pay increases, objectives served by performance-appraisal systems often include:

- Determining training and development needs;
- Planning in specific job performance goals;
- Identifying employees with promotion potential;
- Providing a basis for discussions of their performance

[5] William Schiemann, *Managing Human Resources, 1983 and Beyond*, Princeton, N.J.: Opinion Research Corporation, 1983.

Table 6: Salary Structure Practices, by Industry Category

		Companies with Formal Salary Structures			Companies with Separate Exempt and Nonexempt Salary Structures	
Industry Category		*Number*	*Percent*		*Number*	*Percent*
Manufacturing	(N = 302)	289	96%	(N = 289)	239	82%
Banking	(N = 145)	141	97	(N = 141)	95	67
Insurance	(N = 95)	90	95	(N = 90)	58	64
Diversified finance	(N = 15)	14	93	(N = 14)	9	64
Total	(N = 557)	534	96%	(N = 534)	401	75%

In their interaction in pay for performance, both systems serve the same end. Generally, the employee's performance is evaluated by the supervisor using the performance-appraisal system. Individual performance is then related to the performance of the others in the particular unit of the organization. The manager making the appraisals recommends salary increases for the employees in the unit, based on their performance and subject to the budgetary limits established for increases. Usually some "nonperformance" factors are also considered, such as position in the salary range and time since the last review.

Corporate Compensation Systems

The central part of the corporate compensation system is the salary structure: the formal relationship among jobs in terms of their relative value within the organization and their dollar value on the outside labor market. These relationships are established by job evaluation. The result is that jobs of similar internal and external worth are grouped in the same category or "grade" in the structure, with jobs of greater and lesser worth grouped in grades above and below. Each grade has a dollar minimum, maximum and midpoint. The minimum is the entry-level pay rate; the maximum is the most that can be paid to the incumbents; and the midpoint reflects the "market value" or average rate for the jobs in the grade. If there is a discrepancy between the internal worth of a job in relation to others and the external rate of pay, competitive-pay considerations usually take priority. This occurred recently when the market rates for certain electronic data-processing positions forced some companies to pay more than was justified on the basis of internal relationships.

The establishment and maintenance of the salary structure provide a path whereby individual employees have the opportunity to progress through their salary ranges and move by promotion into jobs with higher ranges. This is customarily done by creating sufficient spread between the minimums and maximums of the ranges to allow employees to receive periodic pay increases. Frequently, the higher the level of the job, the wider the salary range, since the higher salaries produce correspondingly larger increases and promotional opportunities are less frequent. In this process, various nonperformance constraints on individual increases are operative, including position in the salary range in relation to the midpoint, length of time since the last increase and the limitation of the budget for salary increases.

Formal Salary Structures

Virtually all (96 percent) of the companies participating in the survey reported formal salary structures. The same pattern of responses shown in Table 6 was seen in the four industry categories.

Three-quarters of the companies with formal salary structures had separate structures for exempt and nonexempt positions. With respect to the four industry groups, manufacturing companies were most likely to have separate exempt and nonexempt structures.

When separate exempt and nonexempt structures were reported, the median number of grades in the exempt structure for all industry categories combined was 19. The median number was 23 in manufacturing; 15 in banks; and 17 each in insurance and diversified finance. When there was one structure for both exempt and nonexempt jobs, the median number of grades for all industries combined was 25. The median for manufacturers was 29; banking, 27; and insurance, 25. There were insufficient data for diversified finance to permit separate analysis.

It should be mentioned that some companies using the Hay system, one of the job-evaluation methods discussed below, do not have salary grades as such.[1] Rather, each job had its own salary range based on the number of evaluation or "Hay" points assigned to it. Sixty-six companies, somewhat less than half the number using the Hay system, reported this practice.

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[1] The Hay Guide Chart-Profile Method of job evaluation was developed by Hay Associates, Philadelphia, Pennsylvania. It provides a method for analyzing job content in terms of three factors: "know-how" (the knowledge and skills needed for satisfactory job performance); "problem solving" (the amount of original thinking required by the job); and "accountability" (the scope of the job within the organization).

Table 7: Type of Job Evaluation System, by Industry Category

	Hay System		*Ranking— Market Pricing*		*Point Factor*		*More Than One System*		*Factor Comparison*		*Other*	
Industry Category	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Manufacturing (N = 269)	92	34%[a]	79	29%	48	18%	25	9%	14	5%	11	4%
Banking (N = 127)	33	26[a]	39	31	34	27	8	6	7	6	6	5
Insurance (N = 84)	35	42	12	14	11	13	15	18	5	6	6	7
Diversified finance (N = 11)	2	—	5	46	4	36	—	—	—	—	—	—
Total (N = 491)	162	33[a]	135	28%	97	20%	48	10%	26	5%	23	5%

[a] Percentages do not add to 100 because of rounding.

Job-Evaluation Systems

Job-evaluation systems can be broadly grouped as "analytic" and "nonanalytic." Analytic job evaluation establishes the value of a position by determining the proportionate weights for the various elements required for its successful performance. For example, the relative degree of "know-how," "problemsolving," and "accountability" required to perform a job are the elements (or factors) used in one analytic job-evaluation method, the Hay system. The other two analytic job-evaluation methods dealt with here are the point-factor and factor-comparison systems.

The nonanalytic methods evaluate the job as a whole, rather than its components. This evaluation is done in terms of the internal worth of the job relative to others in the organization; in terms of its dollar worth on the labor market; or, most commonly, as a combination of internal and external values. The three variations were surveyed under the general heading, "ranking or market pricing." The other major nonanalytic method, classification or grading, is used almost exclusively in government and is not dealt with here. The General Schedule (GS) classification system of the U.S. Civil Service Commission is probably the best-known example of this approach.

Of the 550 companies responding to the survey question on job evaluation, 491 (almost 90 percent) reported a formal job-evaluation plan. Overall, the Hay system (or a modification of it) was the most widely used, with one-third of the respondents reporting it. Ranking or market-pricing systems were second among the entire sample, accounting for 26 percent of the systems. Third were point-factor approaches, used by 20 percent of all respondents.

In terms of the four industry categories, the Hay system was most widely used among manufacturing and insurance companies. Banks and diversified financial companies, on the other hand, preferred ranking or market pricing. Table 7 shows the prevalence of the different evaluation systems by industry group and for the entire sample.

Pay Increases

The surveyed companies were asked about their *policies* governing the various types of pay increases that could be granted to exempt employees. They were also asked to report the size of increases *actually granted* to exempt employees in 1982. The types of salary increases surveyed were:

Merit: Individual, performance-based pay increases.

General: Uniform pay increases granted to all (or most) employees simultaneously.

COLA (Cost-of-living): Pay increases determined by a cost-of-living formula.

Of the 557 companies surveyed, 95 percent reported policies for granting merit increases to exempt employees. This percentage was identical for all industry categories, except the diversified financial group, where all the companies reported merit-increase policies for exempt personnel.

In contrast with the prevalence of policies for merit increases, general and COLA increase policies were relatively infrequent for exempt employees. They were reported by only 19 percent and 14 percent of all companies, respectively. These increases are most common for hourly employees, particularly those represented by collective-bargaining agreements.[2] Table 8 (page 12) shows the frequency of use of policies for granting the three types of increases to exempt employees for each industry category.

With respect to increases actually granted, 510 companies (96 percent of the 531 with merit-increase policies) granted these increases to at least some of their exempt employees during 1982. In terms of the industry groups, all of the banks and diversified financial companies granted merit increases, as did 98 percent of the insurance companies and 93 percent of the manufacturers.

The median merit increase for all industries combined was 8.8 percent of salary. This did not vary appreciably among the industry categories, ranging from 8.7 percent (manufacturing and banks) to 9 percent (insurance and diversified finance).

Overall, general and COLA increases granted to exempt employees were a very small part of 1982 compensation actions. Only 14 companies granted general increases; and

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[2] Peck, Report No. 796, 1981.

Table 8: Salary-Increase Policies Covering Exempt Employees, by Industry Category

Industry Category	*Type of Policy* *Merit* *Number*	 *Percent*	 *General* *Number*	 *Percent*	 *COLA* *Number*	 *Percent*
Manufacturing (N = 302)	288	95%	60	20%	44	15%
Banking (N = 145)	138	95	23	16	18	12
Insurance (N = 95)	90	95	22	23	13	14
Diversified finance (N = 15)	15	100	2	13	2	13
Total (N = 557)	531	95%	107	19%	77	14%

only 15 made any COLA adjustments. The 1982 median general increase for all companies granting them was 6 percent, and the overall median COLA increase was 3.2 percent. The numbers in each industry category granting these increases were too small for analysis.

With respect to exempt employees, Table 9 shows the prevalence of the various types of increases *granted* during 1982 in each industry category and for the whole sample; Table 10 shows the amount of each type of increase granted in 1982 for all companies combined; Table 11 summarizes the range in size of *merit increases only* for the four industry categories and for all industries combined. Thus, in regard to both compensation *policies* and *practices*, in the particular year 1982, the merit increase is practically the sole method for raising the pay of exempt personnel. This is the result of a philosophy (pay for performance) manifested in a technique (merit pay).

It is important to recognize, however, that while merit increases are related to employee performance, they do not reflect performance exclusively. If this were the case, salary increases would always be granted when there was identifiable performance improvement. As discussed previously, most companies have established through job evaluation a maximum dollar value for positions that, generally, cannot be exceeded—regardless of performance improvement.

Conversely, if performance were the sole basis for pay increases, when the quality of an employee's work declined his (or her) salary would be reduced. In actual practice this occurs very rarely; discharge usually comes before a pay cut. In fact, it has been held that merit-pay plans, at best, represent only a partial pay for performance because there is no real downside risk.

A number of nonperformance factors, previously referred to, are taken into consideration in determining the size and frequency of merit increases for exempt employees. Merit-pay plans are thus a compromise between pay for individual performance and the nonperformance factors, which may include:

- Position in the salary range;
- Time since last increase;
- Size of last increase;
- Pay relationships within the unit;
- Pay relationships with similar jobs in other units;
- Pay of similar jobs in other companies;
- Pay levels of newly hired employees;
- Supervisor-subordinate pay relationships;
- Budgetary limits on salary increases.

Some companies have explicitly stated that the merit increase is the "vehicle" for raising exempt pay, recognizing the influence of factors other than, or in addition to, individual performance.

Merit-Pay Administration

The administration of the typical merit-pay program for exempt employees involves establishing a merit-increase budget; the allocation of it among units in the company; and the issuance of guidelines to managers to aid them in determining individual merit increases for the employees they supervise.

Table 9: Types of Increases Granted in 1982 to Exempt Employees, by Industry Category

Industry Category	*Types of Increase* *Merit* *Number with Policy*	 *Number of Increases*	 *Percent*	 *General* *Number with Policy*	 *Number of Increases*	 *Percent*	 *COLA* *Number with Policy*	 *Number of Increases*	 *Percent*
Manufacturing	288	269	93%	60	8	13%	44	10	23%
Banking	138	138	100	23	1	4	18	2	11
Insurance	90	88	98	22	5	23	13	3	23
Diversified finance	15	15	100	2	—	—	2	—	—
Total	531	510	96%	107	14	13%	77	15	19%

Table 10: Size of 1982 Increases for Exempt Employees, All Industries (as percents of salary at time of increase)

Type of Increase	Number of Companies	Size of Increase Median	Middle 50 Percent Range Low	Middle 50 Percent Range High
Merit	510	8.8%	7.5%	9.8%
General	14	6.0	4.5	7.0
COLA	15	3.2	1.6	5.1

Table 11: 1982 Merit Increases to Exempt Employees, by Industry Category (as percents of salary at time of increase)

Industry Category	Number of Companies	1982 Merit Increase Median	Middle 50 Percent Range Low	Middle 50 Percent Range High
Manufacturing	269	8.7%	7.2%	9.8%
Banking	138	8.7	7.9	10.0
Insurance	88	9.0	8.0	9.9
Diversified finance	15	9.0	8.0	9.7
Total	510	8.8%	7.5%	9.8%

Table 12: Considerations in Establishing Merit-Increase Budgets, All Industries

Factor	Number of Mentions	Average Rank[1]
External pay relationships	503	1.9
Company financial results	471	2.6
Company financial prospects	452	2.9
Internal pay relationships	419	3.7
Cost-of-living changes	420	4.3
Ability to hire	386	4.7

[1] = most important.

Merit-Increase Budgets

A budget for the year's merit increases is usually established in the late Summer to early Fall of the preceding year. A number of considerations determine the amount to be spent for merit increases. Table 12 shows the number of times each of several major considerations influencing the budget was mentioned, and the average rank of importance each was given by the respondents. Industry group data are not shown since there was almost no variation from the composite results.

Allocation of Merit-Increase Budgets

When the merit-increase budget is allocated among units of the corporation, the method most frequently used (63 percent of the respondents) is to distribute a uniform percent of payroll to all units. Thirteen percent allocated the budget according to the compa-ratio of the unit. (Compa-ratio is the relationship between the average salary in a unit and the unit's average salary-grade midpoint.) Twenty-two percent used some other method, most often allowing each unit to devise its own budget. The remaining companies used more than one method of allocation. Table 13 shows the occurrence of these practices among the four industry groups and overall.

Merit-Pay Guidelines

It was the practice of 456 (83 percent) of the 552 companies answering the question to issue guidelines to managers as an aid in recommending merit increases for their subordinates. These guidelines usually related ranges of merit-increase possibilities, expressed as percents of salary, to performance categories ranging from unsatisfactory (however defined) to outstanding (however defined).

The simpler guidelines have only two variables: level of performance as the independent variable and the range of merit-increase possibilities as the dependent variable. Exhibit 2 (on page 14) is an example of this type of guideline. The more complex guidelines have other variables in addition to performance level and merit-increase amounts—usually position in the salary range and time since last in-

Table 13: Allocation of Merit-Increase Budgets Among Units, by Industry Category

	Allocation Practice							
	Uniform Percent of Payroll		Unit Compa-ratio		Other		More Than One Method	
Industry Category	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Manufacturing (N = 291)	176	61%	36	12%	70	24%	9	3%
Banking (N = 136)	102	75	15	11	18	13	1	1
Insurance (N = 88)	50	57[a]	18	21	20	23	—	—
Diversified finance (N = 15)	8	53	1	7	6	40	—	—
Total (N = 530)	336	63%	70	13%	114	22%	10	2%

[a] Percentages do not add to 100 because of rounding.

Exhibit 2: Two-Variable Merit-Increase Guideline: A Paper Products Company

Definition of Performance Characteristics	*Percentage of Base Salary*
Exceptional personal contribution to departmental, divisional or corporate goals. Performance attainments are clearly obvious to all. Results attained far exceed position requirements.	9
Accomplishments surpass those attained by the majority of others similarly classified, and usually exceed position requirements and normal expectations. Demonstrated potential as candidate for higher classification.	6.0-8.0
Work meets position requirements either fully or with rare exceptions, and represents the level of performance expected.	3.5-6.0
Results are frequently less than desired, and necessity for further development is clearly recognizable.	2.0-3.5
Performance falls seriously below minimum requirements. Adaptation to position requirements or company standards highly questionable.	0

crease. Exhibit 3 illustrates the more complex type of guideline.

Latitude for the manager's judgment in recommending merit-increase amounts and timing was built into most of the guidelines studied. The manager determined the performance level of the employee and then recommended the merit increase, working within the allowable range of increase amounts and the restrictions imposed by time since last increase and position in the salary range. Overriding these variables was the limitation imposed by the amount allocated to the particular unit for salary increases. Some companies did not make the unit's total salary budget an absolute limit, however, for managers could be granted extra merit dollars if they could justify the need on an "exceptional case" basis. Whether or not the budget acted as an absolute limit, many companies treated guidelines literally as "guides," and allowed managers to depart from them in the event of special circumstances—usually some sort of pay inequity. Following are some situations where departures from merit-increase guidelines were allowed:

- Adjustment for external equity;
- New hire at higher rate than a current employee in the same position;
- Supervisor-subordinate pay compression;
- Need to retain an employee;
- Need to comply with legal equal-pay requirements;
- Need to correct a below-salary-range-minimum situation.

Range of Actual Merit Increases

The range of merit increases actually granted in a year can provide a clue to the rigor with which pay for performance is being pursued by the companies surveyed. The greater the spread between the lowest merit increase granted and the highest, the greater, presumably, is the discrimination being made on the basis of performance. The complaint frequently heard from survey participants was that managers responsible for recommending merit increases did not use the full range of increase possibilities or, expressed another way, overused the middle categories by giving all their subordinates increases within a narrow band. (This problem is discussed further on pages 21-22.)

The companies surveyed were asked to report the actual "low" and "high" merit increases granted to their exempt populations in 1982. The median *low* merit increase for the entire sample was 5 percent of salary; the median *high* merit increase was 14.3 percent. The median low and high merit increases for each industry group appear in Table 14.

Overall, the spread between the low and high increase was 9.3 percentage points. The median high merit increase was almost three times as much as the median low increase, a most definite distinction. However, it must always be kept in mind that the nonperformance factors listed earlier influence the merit-increase awards.

When the industry categories in Table 15 are examined, the spread between the low and high increases ranged from 9 percentage points (manufacturing and insurance) to 11 percentage points (banking). The high median increase of 15 percent in the banking industry was almost four times the low increase of 4 percent.

Table 14: 1982 Low and High Merit Increases, by Industry Category (as percents of salary at time of increase)

	Low Merit Increase		*High Merit Increase*	
Industry Category	*Number of Companies*	*Median*	*Number of Companies*	*Median*
Manufacturing	211	5.0%	259	14.0%
Banking	98	4.0	134	15.0
Insurance	56	5.0	82	14.0
Diversified finance ..	9	5.0	14	15.5
Total	374	5.0%	489	14.3%

Exhibit 3: Multivariable Merit-Increase Guideline: An Insurance Company

	Position in Range in Relation to Midpoint				
Performance	*Below 0.80 (Below Minimum)*	*0.81-0.95*	*0.96-1.05*	*1.06-1.20*	*Above 1.20 (Above Maximum)*
Well exceeds accountabilities	12%-15% 9 months[a]	12%-15% 12 months	12%-15% 12 months	11%-14% 15 months	7% * 18 months
Exceeds accountabilities	9%-11% 9 months	9%-11% 12 months	9%-11% 12 months	8%-10% 15 months	6% * 18 months
Meets accountabilities	6%-8% 9 months	6%-8% 12 months	6%-8% 12 months	5%-7% 15 months	5% * 18 months
Meets most accountabilities	5% 9 months	5% 12 months	5% 15 months	5% 18 months	No increase
Meets few accountabilities	No increase	No increase	No increase	No increase	No increase

*Requires special approval

[a] In all cases, months since last increase.

When the high and low merit increases from Table 14 are compared with the median merit increases for the entire sample and for each industry group from Table 11, a somewhat different perspective emerges. The 1982 overall merit increase was 8.8 percent. The 1982 low merit increase was 5 percent and the high increase was 14.3 percent. Thus, the difference between the low and overall increases was 3.8 percentage points, while the difference between the overall and high increases was 5.5 percentage points. This suggests less pay distinction between average and low increases than between average and high increases. This same pattern holds true among the four industry groups, as shown in Table 15.

The tentative conclusion from these comparisions is that more pay increase distinction is made between superior and average performance than between average and inferior performance. This may illustrate the tendency (mentioned earlier) to avoid the downside risk involved in giving substantially lower or even "zero" increases to below-average performers.

Other Pay for Performance

In addition to the merit increase, which recognizes employee performance to at least some degree, there are a number of other arrangements that pay compensation to exempt employees on some kind of performance basis. The performance in question may be that of an individual, of a team of employees, of a corporate unit such as a department or division, of the whole corporation, or any combination of these.

The programs themselves may be quite formal, with the amount of compensation mathematically determined according to the degree of achievement of preset goals; or they may be highly discretionary, with the size of awards depending on subjective evaluation of performance. Many plans provide for a split award—with a portion determined by some sort of formula and the remainder depending on individual performance evaluation. Table 16 shows the prevalence for each industry category and for the entire sample of the most frequently used nonsalary compensa-

Table 15: Comparison of 1982 Merit-Increase Medians, by Industry Category
(as percents of salary at time of increase)

	Low Merit Increase vs. Median Merit Increase			*High Merit Increase vs. Median Merit Increase*		
Industry Category	*Median Low Merit Increase*	*Median Merit Increase*	*Difference*	*Median High Merit Increase*	*Median Merit Increase*	*Difference*
Manufacturing	5.0%	8.7%	3.7	14.0%	8.7%	5.3
Banking	4.0	8.7	4.7	15.0	8.7	6.3
Insurance	5.0	9.0	4.0	14.0	9.0	5.0
Diversified finance	5.0	9.0	4.0	15.5	9.0	6.5
Total	5.0%	8.8%	3.8	14.3%	8.8%	5.5

Table 16: Nonsalary Compensation Plans Including Exempt Employees, by Industry Category

	Industry Category									
	Manufacturing (N = 302)		Banking (N = 145)		Insurance (N = 95)		Diversified Finance (N = 15)		Total (N = 557)	
Type of Plan	Number	Percent of Companies	Number	Percent of Companies	Number	Percent of Companies	Number	Percent of Companies	Number	Percent of Companies
Top executive bonus	219	73%	68	47%	32	34%	3	20%	322	58%
Long-term incentive	91	30	7	5	3	3	—	—	101	18
All employee bonus	28	9	8	6	5	5	4	27	45	8
Current profit sharing	24	8	28	19	7	7	2	13	61	11
Group productivity incentive	7	2	6	4	3	3	1	7	17	3
Group cost control incentive	2	1	—	—	—	—	1	7	3	—

tion programs which include at least some exempt employees.[3]

The performance-related compensation program most frequently found among the sample was the annual top-executive bonus plan. This type of incentive plan provides for the possibility of awards to eligible employees from a fund determined by a formula based on annual corporate profits. Bonus eligibility is generally determined by job title, organization level, salary grade, or minimum salary. The amounts awarded from the bonus "pool" to individual recipients is based on an evaluation of their performance in the year, quite often in respect to achievement of specific goals and objectives set at the beginning of the bonus period.[4] These plans may contain "lightning strike" provisions, where a contribution (such as an invention or the development of a cost-savings method) by an employee not ordinarily eligible for a bonus can result in a special award.

Top-executive bonus plans were found most often among manufacturers, where 219 of 302 manufacturing companies reported them. Although the number of banks, insurance companies and diversified financial institutions with these plans has steadily increased over the years, still less than half reported such arrangements.

Long-term management incentive plans, also called performance unit/share plans, were second, but a very poor second, to top-executive bonus plans in frequency. These plans were found almost exclusively among manufacturers; 91 of the 101 plans were in manufacturing companies.

Awards under these plans depend on the achievement of certain corporate results over three, four or five years. The goal most often used is the attainment of a targeted increase in earnings per share. At the start of the performance period, units representing either dollar amounts (performance units) or shares of stock (performance shares) are contingently credited to a participant's account. If the target is met by the end of the performance period, the participant receives the full number of dollars or shares of stock in his (or her) account. If the target is exceeded, a greater amount is paid up to a specified maximum. If the target is missed, the actual award will be less than the contingent amount, down to a specified minimum below which no award is paid.[5]

The top-management bonus program and the long-term management-incentive plan are, as the names imply, designed primarily for upper management. Although there is some participation by exempt employees below that level, it is not extensive—particularly in the case of the long-term plans which are, in fact, used almost exclusively for top executives. The other types of programs surveyed, including all-employee bonus plans, current pay profit sharing, group productivity, and group cost-control incentives, had a very low incidence of use among exempt employees. There was no indication of performance-based pay plans designed specifically for the exempt population as a whole.

Table 17 shows the amount of compensation, as a percent of 1982 salary, paid to four levels of exempt employees from *all* performance-related compensation programs combined, excluding the salary program. The information is shown for the total sample and for each industry category except diversified finance, where the number of payments was too small for analysis.

Compensation practitioners generally believe that for incentive compensation to be an effective motivator, it should be at least 10 percent of the recipient's salary. The overall median payment from all incentive plans for the top-executive group was 30 percent of base salary. Median payments ranged from a high of 38 percent among manufacturing companies to a low of 15 percent among insurance companies. Therefore, in all cases, total incen-

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[3] Stock-option plans have been excluded because of the difficulty in establishing a dollar value of awards for comparison with other awards. For information on these plans, see Fox, Research Bulletin No. 148, 1983.

[4] See Fox, Report No. 760, 1979.

[5] For an analysis of these plans, see Lawrence C. Bickford, "Long-term Incentives for Management, Part 6: Performance Attainment Plans." *Compensation Review*, Third Quarter, 1981, and Fox, Research Bulletin No. 132, 1983.

Table 17: 1982 Total Awards to Exempt Employees from Nonsalary Compensation Plans, by Industry Category
(as percent of salary at time of award)

	Manufacturing			*Banking*			*Insurance*			*Total*		
		Middle 50-Percent Range			*Middle 50-Percent Range*			*Middle 50-Percent Range*			*Middle 50-Percent Range*	
Level of Employee	*Median*	*Low*	*High*	*Median*	*Low*	*High*	*Median*	*Low*	*High*	*Median*	*Low*	*High*
Top executive	38%	24%	52%	20%	11%	30%	15%	10%	23%	30%	16%	47%
Middle management	20	12	27	13	9	18	10	5	13	18	10	25
Lower management	10	6	15	10	6	15	5	2	6	10	5	15
Other exempt	6	3	10	9	6	11	5	2	6	7	4	10

tive compensation for top executives was over the "effective threshold." The same is true for middle management where median overall incentive compensation was 18 percent of salary and the range was from 20 percent (manufacturers) to 10 percent (insurance). Lower management made the 10-percent threshold overall and in manufacturing and banking; insurance companies reported median total incentive compensation of 5 percent. Payments to nonmanagement exempt employees were below 10 percent in all cases, with an overall median of 7 percent.

In 1982, according to this analysis, performance-related compensation plans, other than the salary program, generally did not play a significant role in the compensation of exempt employees other than the top-management group, and to some extent, middle management.

Corporate Performance-Appraisal Systems

The other half of the pay-for-performance process, as already indicated, is the performance-appraisal system.[6] Just as there are nonperformance aspects to the compensation system, there are other uses for data generated by performance-appraisal systems than determining performance-related compensation. The information produced by the performance-appraisal process is also needed for overseeing current operations and planning for the future; for determining transfers, promotions, demotions and terminations; and for developing manpower plans and assessing future staffing requirements.

Prevalence of Formal Performance Appraisal

Formal performance-appraisal systems, used for determining merit increases for *any* exempt employees, were reported by 83 percent (459) of the 553 companies answering the question. As shown in Table 18, formal programs were most often found in banking and insurance.

Performance Areas Evaluated

The participating companies were asked to specify the items evaluated by their performance-appraisal systems in determining exempt merit increases. They were also asked to rank the relative importance of each. Table 19 shows the responses from the entire sample; since there was almost no variation from these results among the four industry groups, separate data are not shown. The "achievement of specified performance results" was mentioned most frequently and had the highest average rank.

Methods of Appraising Performance

Over the years, a number of different approaches to performance appraisal have been developed. All are current-

Table 18: Prevalence of Formal Performance-Appraisal Systems, by Industry Category

	Companies with Formal Peformance-Appraisal Systems	
	Number	*Percent*
Manufacturing (N = 299)	232	78%
Banking (N = 145)	134	92
Insurance (N = 94)	82	87
Diversified finance (N = 15)	11	73
Total (N = 553)	459	83%

Table 19: Items Evaluated by Performance-Appraisal Systems, All Industries

Item	*Number of Mentions*	*Average Rank*[1]
Achievement of specified performance results	429	1.1
Evidence of specified on-the-job behavior	366	2.5
Evidence of general management or professional skills	377	2.6
Evidence of promotion potential	322	3.9
Evidence of specified personal characteristics	289	4.3

[1] = most important.

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[6] See Robert I. Lazer and Walter S. Wikstrom, *Appraising Managerial Performance: Current Practices and Future Directions.* The Conference Board, Report No. 723, 1977.

Table 20: Types of Performance-Appraisal Systems Used for Exempt Merit Increases, by Industry Category

	Industry Category									
	Manufacturing (N=229)		*Banking (N=134)*		*Insurance (N=81)*		*Diversified Finance (N=11)*		*Total (N=455)*	
Type of System	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Management by objectives (MBO)	114	50%[a]	53	40%	39	48%	6	55%	212	47%[a]
Essay or open-ended questions (as the only method)	32	14	26	19	11	14	2	18	71	16
Ratings										
Graphic rating scale	19	8	19	14	10	12	—	—	48	11
Behaviorally anchored rating scale	1	—	—	—	1	1	—	—	2	—
Checklists										
Straight checklist	13	6	5	4	6	7	—	—	24	5
Forced choice	10	4	9	7	7	9	1	9	27	6
Ranking or comparison										
Straight ranking	5	2	5	4	2	3	—	—	12	3
Alternation ranking	2	1	1	1	—	—	—	—	3	1
Paired comparison	—	—	2	2	—	—	—	—	2	—
Other or combination	33	14	14	10	5	6	2	18	54	12

[a] Percentages do not add to 100 because of rounding.

ly in use to at least some extent. The various methods can be classified according to the following categories:

- Rating scales;
- Checklists;
- Rankings or comparisons of employees with one another;
- The comparison of results with preset objectives;
- Open-ended narrative descriptions of performance.

In actual use, these distinctions among performance-appraisal approaches are not always clear-cut, and the same system may employ more than one method. Table 20 shows the various performance-appraisal approaches used in each of the four industry groups and for all industries combined.

The performance-appraisal method most freqeuntly used was management-by-objectives (MBO). Forty-seven percent of the 455 companies identifying their system used it—almost three times as many as used any other approach. Management-by-objectives was also most frequently used in each of the four industry categories.

The next most often used performance-appraisal system was the essay, or open-ended question, method as *the only method used*. However, it ran a rather poor second to MBO systems.

The actual use of the essay, or open-ended question, approach was no doubt somewhat greater than these data indicate, for it is often used in conjunction with other methods. For example, management-by-objectives appraisal systems also use essays, and very often require open-ended or narrative statements concerning planned results. Furthermore, most appraisal forms, regardless of type, ask for a narrative statement by the manager of each subordinate's overall strengths and weaknesses.

Relative Appraisal

For the purpose of determining merit increases, it is customary to convert the results of the appraisals of individual employees to a distribution of overall performance evaluation, each employee relative to the others in the group being appraised. The three main methods used to accomplish this conversion are: (1) the distribution of employees results automatically from a ranking or paired-comparison approach; (2) the values on a rating scale are totaled (or given other formula treatment) to arrive at overall numerical ratings which are then distributed; and (3) the appraiser makes a judgmental overall rating of each employee's performance after completing the other parts of the appraisal, with the individual judgments then being distributed.

A judgmental approach was by far the most commonly used method. It was reported by 85 percent (362) of the 424 companies answering the question. Formula treatment was used by 12 percent (48), while automatic distribution accounted for only 3 percent (14) of the sample.

Performance Categories

The distribution of appraisal results for merit-increase purposes is usually done by assigning them to performance categories. These are the categories that appear on the merit-increase guidelines and are related to ranges of possible increases. (See pages 13-14 above.) The performance categories may be identified by a word, for example, "distinguished," "commendable," "competent" or "unsatisfactory"; by number, from best to worst or worst to best; or by a letter designation. At any rate, each category

Exhibit 4: Five Performance Categories, Modified Numerical Code: A Life Insurance Company

1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
PROVISIONAL	**ADEQUATE**	**COMPETENT**	**COMMENDABLE**	**DISTINGUISHED**
A provisional rating for inexperienced newcomers and others whose performance is clearly below the acceptability level. Incumbents should either move up in performance or be removed from the position in a relatively short time.	Rating for employees whose performance comes close to being "acceptable," but the need for further development is recognizable.	Rating for employees whose performance is fully "capable or worthy of being accepted; satisfactory; sufficient."	Rating for employees whose performance is clearly better than "acceptable" or "expected."	This rating is normally reserved for those few individuals whose outstanding performance is obvious to all.

Exhibit 5: Four Performance Categories, Straight Numerical Code: A Consumer Products Company

Performance Code	*Definition*
1	Unique and exceptional performance achieved by very few employees.
2	Performance that consistently meets and may exceed job requirements. It is expected that most employees would be rated in this category.
3	Performance where improvements are needed to meet job requirements.
4	Performance which is unacceptable.

Exhibit 6: Four Performance Categories, Letter Code: A Building Products Company

A. **Exceptional**—Consistently exceeds goals, objectives and standards of performance

B. **Commendable**—Consistently meets and frequently exceeds goals, objectives and standards

C. **Competent**—Meets overall goals, objectives and standards of performance with weaknesses offset by strengths

D. **Unsatisfactory**—Fails to meet minimum goals, objectives and standards of performance, and requires improvement to reach competent level

has a description attached to it for use of the manager making the appraisal. Exhibits 4, 5 and 6 illustrate different examples of performance-appraisal categories used by the survey participants.

Ninety-two percent (422) of the 458 companies answering this question assigned the appraisal results to performance categories. The median number of categories used was five; there was no variation from these practices when the data were examined according to type of industry.

Forced Distribution

A problem in the application of the compensation-performance-appraisal system to pay for performance is "the tail wagging the dog." This results when a manager decides in advance what salary increase to give a subordinate, and then manipulates the performance appraisal so the results will justify the desired increase. The employee in question is then slotted in the performance category that, under the guidelines, yields the predetermined increase. Another problem, which has been mentioned previously, is the tendency of some managers to overuse the middle performance categories and neglect the full scale of increase possibilities, particularly the lower end of the scale.

To counter these tendencies, some companies use a "forced distribution" approach when managers rate employees relative to each other for merit-increase determination. Forced distribution requires the appraiser to assign specific percentages of subordinates to each performance category: for example, 10 percent in the top category, 20 percent rated better than average, 40 percent average, 20 percent below average, and 10 percent unsatisfactory. The outcome of this forcing is the bell-shaped curve of normal statistical distribution. Although this method would seem to eliminate overuse of middle categories and guard against undue severity or leniency and manipulation, many managers find its rigidity a curb on, and a criticism of, their ability to make proper judgments. This approach also tends to break down and become meaningless when small numbers of employees are involved.

Formal forced distribution requirements were found in 10 percent (46) of the 454 companies answering the question. Thirty-seven percent (166 companies) said that although they did not formally require forced distribution, they did try to get managers to reflect a normal (bell-shaped curve) distribution of their performance ratings. Practices in regard to forced distribution by industry group are shown in Table 21.

Purposes of Performance-Appraisal Systems

Most of the performance-appraisal systems for exempt personnel studied here were multipurpose. That is, the data

Table 21: Forced Distribution Practices, by Industry Category

	Forced Distribution Practice					
	Formally Done		*Informally Done*		*Not Done*	
Industry Category	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Manufacturing (N = 228)	29	13%	82	36%	117	51%
Banking (N = 133)	9	7[a]	50	38	74	56
Insurance (N = 82)	7	9	32	39	43	52
Diversified finance (N = 11)	1	9[a]	2	18	8	72
Total (N = 454)	46	10%	166	37%	242	53%

[a] Percentages do not add to 100 because of rounding.

Table 22: Purposes Served by Performance-Appraisal Systems, by Industry Category[1]

	Industry Category				
Purpose	*Number of Manufacturers (N = 232)*	*Number of Banks (N = 134)*	*Number of Insurance Companies (N = 82)*	*Number of Diversified Financial Companies (N = 11)*	*Total (N = 459)*
Determining merit increases	232	134	82	11	459
Providing basis for giving employees feedback on their performance	222	131	79	10	442
Planning job-performance goals with employees	198	120	72	11	401
Determining training and development needs	178	103	62	9	352
Identifying promotion potential	175	100	61	10	346
Identifying employees with specific skills and abilities	115	68	48	5	236

[1] A company may indicate as many purposes as applicable.

generated by the appraisal process were used for a number of different ends. A question was asked to determine what major purposes these data were used for—in addition to determining merit increases. Table 22 summarizes the responses.

Other than determining merit increases, the purpose for which performance appraisal data were most often used by all industries, except diversified finance, was to provide a basis for giving employees feedback on their performance.

From among the different purposes served by the same appraisal plan, the participants were asked to specify the one they considered *most* important and the one they considered *second most* important. Table 23 shows the frequency with which the various purposes were rated most important by the respondents; Table 24 shows the information for the second most important purpose.

The most important purpose served by the performance-appraisal system, according to the participants, was determining merit increases. This was true in all four industry categories. The second most important purpose for the sample as a whole was providing performance feedback to employees.

An immediate reaction to the high priority given to merit-increase determination might well be to consider it a result of the fact that the great majority of respondents were compensation administrators, who would naturally regard their own function as most important; and this may be true to an extent. However, when the designations by the whole sample of merit-increase determination as most important and employee feedback as second most important are considered together, it appears there may be more involved than the very natural tendency to see one's own function as having highest priority. When a performance-appraisal program for exempt employees is regarded as a total system for employee, and especially management, development, the two items can be seen as having greater real importance than is at first apparent. Administering a compensation program to motivate and reward superior performance and providing information to employees on how they are currently performing their jobs are vital underpinnings for the entire development process.

The fact that most survey participants designate merit-increase determination as the most important purpose and employee feedback as the second most important highlights the potential for conflicting objectives in multipurpose appraisal systems. Deciding merit-increase awards is an administrative decision. The appraiser's function is to judge on the basis of the employee's past performance. On the other hand, when the appraiser is giving the employee feed-

Table 23: Most Important Purpose Served by Performance-Appraisal Systems, by Industry Category

Most Important Purpose	*Industry Category* *Number of Manufacturers (N = 225)*	*Number of Banks (N = 131)*	*Number of Insurance Companies (N = 82)*	*Number of Diversified Financial Companies (N = 11)*	*Total (N = 449)*
Determining merit increases	90	65	39	5	199
Providing basis for giving employees feedback on their performance	85	49	29	2	165
Planning job-performance goals with employees	42	15	11	3	71
Identifying promotion potential	5	1	1	1	8
Determining training and development needs	3	1	1	—	5
Identifying employees with specific skills and abilities	—	—	1	—	1

Table 24: Second Most Important Purpose Served by Performance-Appraisal Systems, by Industry Category

Second Most Important Purpose	*Industry Category* *Number of Manufacturers (N = 220)*	*Number of Banks (N = 128)*	*Number of Insurance Companies (N = 80)*	*Number of Diversified Financial Companies (N = 11)*	*Total (N = 439)*
Determining merit increases	69	36	22	2	129
Providing basis for giving employees feedback on their performance	66	43	38	2	149
Planning job-performance goals with employees	46	34	13	5	98
Determining training and development needs	25	7	4	—	36
Identifying promotion potential	12	7	2	1	22
Identifying employees with specific skills and abilities	2	1	1	1	5

back on past performance, presumably for the purpose of encouraging future performance improvements, the appraiser functions best in the role of a counselor.[7]

Apparently the problem of conflicting purposes has not caused many of the companies surveyed to use more than one performance-appraisal system for the same group of exempt employees. In answer to a specific question, only 10 percent of the respondents indicated that they use more than one system for the same exempt group.

Pay for Performance: Success and Failure Compared

This final section is chiefly concerned with comparing the pay-for-performance systems that survey respondents perceived as very successful with those which were viewed as failures to see if there are any clues as to what constitutes a "good" system. The more theoretical difficulties with pay for performance were discussed above (pages 7-9). It is important, however, also to note the more practical considerations.

Practical Problems in Paying for Performance

Survey respondents were asked to mention the major problems encountered in trying to pay for performance. Following is a list of the problems cited:

- Lack of consistency in ratings among different managers, units, divisions or departments;
- Too many high ratings;
- Too few low ratings;
- Failure of managers to distinguish satisfactorily among different performance levels resulting in an overuse of the middle categories;
- Too many requests by managers for exceptions to guidelines or policies;

---

[7] For a discussion of this problem, see H.H. Meyer, E. Kay and J.R.P. French, Jr., "Split Roles in Performance Appraisal," *Harvard Business Review*, January-February, 1965.

- Overemphasis on internal, nonperformance factors such as longevity, personality, length of service in the company, time on the job, and mechanical considerations such as position in the salary range and time since last increase;
- Performance objectives not clearly defined;
- Dealing with employee perceptions and expectations;
- Failure of managers to use the system correctly.

According to the respondents, who were mostly compensation administrators, the majority of the practical problems encountered in trying to make pay for performance work were caused by the managers responsible for applying the system—and not by defects in the system itself. Underlying this criticism of managers seemed to be an awareness by the participants that no matter how good the system might be, it must be used correctly to accomplish its objective. The respondent for a computer company said: "The major problem involves management discipline and training. The compensation and performance-appraisal tools are good, they are just not used effectively."

Managers' lack of consistency was most frequently mentioned by the respondents. An electronics firm reported: "The weakest point in any performance-based program is the disparity among different managers' perceptions of good, bad and average performance. Inequities result when amounts of increases are based on these perceptions."

The second most frequently mentioned item was the failure of managers to distinguish adequately among performance levels, resulting in an overuse of the middle categories. A diversified manufacturing company's spokesperson said: "Managers find it difficult to make marked distinctions and, therefore, tend to give the average increase to all."

Although it would seem that these two problems might be alleviated, at least in part, by requiring a forced distribution, there was apparently a general reluctance to curtail the scope of managerial judgment. An oil company's respondent summed it up: "A major problem is trying to ensure consistency across different divisions, while at the same time not wanting to force appraisal ratings or inhibit managers from using their own discretion and judgment."

Table 25 shows the number of times each problem was mentioned by each industry group and by the entire sample.

Pay-for-Performance Failures

As shown in Table 4 (page 7), 83 out of 521 companies (16 percent) categorized their programs as failures. In about one-third of the reported failures, the two problems just discussed—lack of differentiation among performance categories and lack of consistency among raters—were severe enough to cause the pay-for-performance effort to fail. About one in seven of the companies with unsuccessful systems said the failure resulted from salary-increase budgets that were too small for meaningful rewards. About one-quarter gave a variety of "other" reasons for failure. The reasons for the remaining failures were spread among the practical problems shown in Table 25.

"Other" reasons given by particular companies for pay-for-performance failure were:

> "Compensation objectives are neither formally set by management nor communicated sufficiently to employees."
>
> —*An Insurance Company*

> "Crisis management often rules—for example, raises are influenced by outside threats to hire away."
>
> —*A Bank*

> "Lack of commitment to pay for performance by higher-level management."
>
> —*A Primary Metals Company*

> "I'm not certain 'pay for performance' for individual managers is a sound compensation strategy. It has a nice flavor, but the complications of setting goals and priorities and measuring results (and, perhaps, how they are achieved) is, at best, an imprecise and subjective process."
>
> —*A Consumer Products Manufacturing Company*
>
> (This was the only statement made in the survey "against" pay for performance.)

> "Budget constraints and forced distribution do not lead to a good pay-for-performance system."
>
> —*An Office Products Manufacturing Company*

Very Successful Pay-for-Performance Systems

As shown in Table 5 (page 7), 26 percent of the companies answering the question said their pay-for-performance efforts had been "very successful." Detailed questionnaire information was available on the compensation and performance-appraisal processes in 88 of these 94 companies.

In an attempt to identify any major differences between the companies reporting very successful programs and those reporting unsuccessful programs, a question-by-question analysis was made of the two sets of survey responses. (Of the total of 83 companies reporting unsuccessful programs, detailed questionnaire information was available for 80.) Approximately the same number of companies was involved: 88 very successful and 80 unsuccessful. The proportions from each of the four industry categories were:

	Very Successful	*Unsuccessful*
Manufacturing	47 (53%)	52 (65%)
Banking	25 (28%)	17 (21%)
Insurance	13 (15%)	10 (13%)
Diversified finance	3 (3%)	1 (1%)
Total	88 (100%)	80 (100%)

Table 25: Problems Occurring Frequently in Administering Pay for Performance, by Industry Category

Problem	*Number of Mentions in Each Industry Category*				*Total Mentions*
	Manufacturing	*Banking*	*Insurance Companies*	*Diversified Financial Companies*	
Lack of consistency	87	40	24	3	154
Overuse of middle categories	81	22	21	3	127
Failure to use system correctly	31	13	10	2	56
Too many high ratings	27	21	8	—	56
Performance objectives not clear	25	17	6	2	50
Overemphasis on external factors	24	3	8	—	35
Employee perceptions and expectations	21	11	14	2	48
Overemphasis on internal factors	11	11	6	1	29
Too few low ratings	8	5	3	—	16
Too many policy exceptions requested	2	2	1	—	5

As measured by number of U.S. employees, number of exempt employees, and financial criteria, the sizes of the very successful and unsuccessful groups were quite similar (Table 26).

In the question-by-question analysis, there was almost no apparent difference in the components of either the compensation or performance-appraisal systems between those perceiving their pay-for-performance program as very successful and those perceiving it as a failure. Thus, no particular practice or practices could be identified as clearly distinguishing the very successful program from the unsuccessful one.

There were a few instances where more than 10 percentage points separated the very successful programs from those that failed. The specific items were:

- More of the companies with very successful systems used the Hay (or a modification) job-evaluation method, while more of those with unsuccessful systems used other point-factor methods.
- More of the companies with unsuccessful programs had performance-related compensation plans, other than the salary program, which included exempt employees.
- More of the companies with very successful programs had formal performance-appraisal systems for determining exempt merit increases.

Since the components of the very successful and unsuccessful programs were virtually indistinguishable and considerable emphasis had been given by survey respondents to the importance of the ways in which managers use the system, a comparison was made to see if criticisms of system users were more prevalent among companies with unsuccessful programs. Again there was almost no difference between the two groups of companies on this point.

Therefore, the difference between pay-for-performance success and failure may very well depend on the perceptions and expectations of those commenting on their systems and may be a product of their individual standards and their conditioning by the particular corporate culture in which they work. Like beauty, pay-for-performance success or failure may ultimately lie in the eye of the beholder.

Table 26: Size of Companies with Very Successful Pay-for-Performance Systems and Companies With Unsuccessful Pay-for-Performance Systems

Industry Category	*Average Number of Employees*	
	Very Successful Systems	*Unsuccessful Systems*
Manufacturing	16,000	17,000
Banking	3,000	3,000
Insurance	2,000	3,000
Diversified finance	*	*

Industry Category	*Average Number of Exempt Employees*	
	Very Successful Systems	*Unsuccessful Systems*
Manufacturing	4,000	5,000
Banking	800	1,000
Insurance	900	1,000
Diversified finance	*	*

Industry Category	*Average 1982 Sales Volume, Total Deposits, Premium Income (millions)*	
	Very Successful Systems	*Unsuccessful Systems*
Manufacturing	$2,500	$2,237
Banking	3,140	3,465
Insurance	468	567
Diversified finance	*	*

*Insufficient data.

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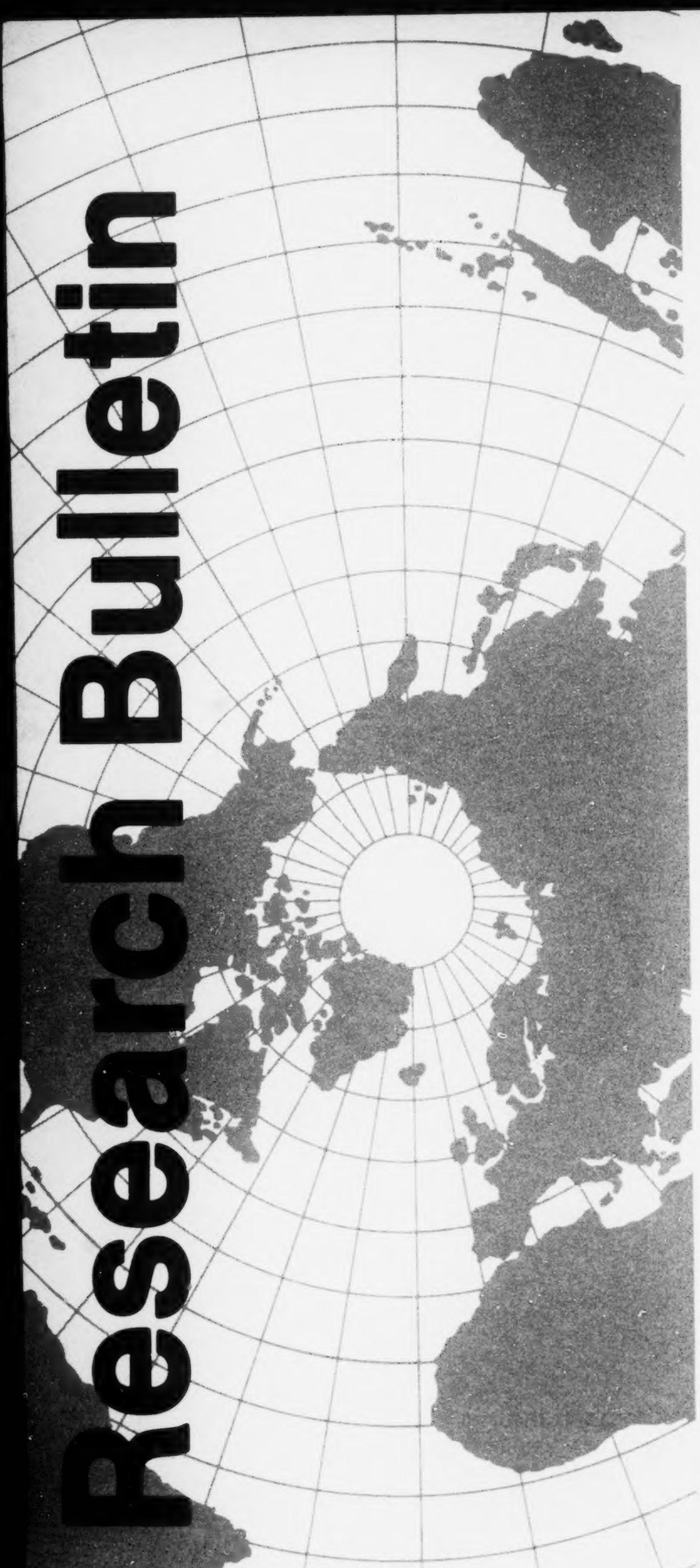

The Dollar and U.S. Exports

Some Q's and A's

By John Hein

The Conference Board

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IN A PIECE on the United States economy and U.S. economic policy, Robert Heilbroner of the New School for Social Research noted in *The New Yorker* last Summer that most Americans, "economists included," had long lived with the comfortable feeling that the United States could conduct its economic affairs without paying much heed to events in the rest of the world. However, that feeling is now ". . .rapidly dissipating, not merely as a consequence of the growth of the supranational realm of finance, but because of equally far-reaching changes in trade and production."

Indeed, over the past few years the influence of the outside world and of international transactions on the United States economy was brought home with a vengeance as declining exports and rising imports led to increasing unemployment in export and import-competing industries—and to mounting pleas for protection. The most common, and on the surface the most persuasive, explanation for the deteriorating United States trade performance has been the strength or "overvaluation" of the dollar relative to other major currencies.

Thus, from *The Washington Post* in the Spring of 1983: "Most of this country's current trade troubles. . .are the result of an overpriced dollar, lifted by high interest rates." Fred Bergsten of the Washington-based Institute for International Economics similarly noted last Summer that the main factor behind the large U.S. trade deficit was "the massive overvaluation of the dollar in the exchange markets." And The Conference Board's own chief economist, A.T. Sommers, sees a strong connection running "from the high budget deficit, to the high real interest rates, to the high valuation of the dollar, to the high trade deficit."

The facts themselves are undisputed. The dollar, which had been falling more or less steadily throughout 1978 and 1979, began to strengthen in the wake of the 1980 Presidential election. Between the end of 1980 and the end of 1983, it rose by 28.3 percent on a "trade-weighted" basis against the currencies of 15 other major countries. If adjustment is made for inflation differentials between the United States and those countries, the dollar rose by 25.9 percent over the same period. Against major individual currencies, such as the West German mark or the French franc, the appreciation was, of course, considerably greater.

At the same time, United States merchandise exports declined from $233.7 billion in 1981 to $200.5 billion last year, a 15 percent drop. (Total world exports declined by only 11 percent over the same period.) U.S. merchandise imports fell slightly from $260.9 billion in 1981 to $258.0 billion in 1983 (in the year between, they had receded to some $244 billion). As a result, the United States trade deficit grew from $27.3 billion to $57.6 billion over the two-year period. If imports are valued on the so-called c.i.f. basis (see box on page 4), the deficit jumped from $39.7 billion to the mammoth $69.4 billion prominently featured in the press.

Yet, it would be an oversimplification to make a straightforward connection between the strengthening of the dollar and the worsening of the United States trade account. First, the relationship between changes in exchange rates and changes in trade flows reflects a variety of decisions by both domestic and foreign producers and consumers and cannot be generalized. Second, the decline in United States exports in 1982 and 1983 can also be traced to factors other than the strong dollar—the lingering recession abroad, the decline in OPEC revenues, and, above all, the financial squeeze on many heavily indebted developing countries.

These strands cannot all be sorted out neatly; there are some intricate cross-connections and feedbacks that defy simple analysis. This brief report merely attempts to separate some of the factors mentioned and to clear up some of the general confusion. It does not discuss the reasons for the strength of the dollar, United States interest rates, or the budget deficit. Instead, it asks some basic questions—how do exchange rates affect trade? how much does the United States economy depend on exports? how has third-world debt affected those exports? and so on—and, hopefully, provides some simple and intelligible answers.

How Do Exchange-Rate Changes Influence Trade?

Exchange-rate changes influence a country's exports and imports—and hence its trade balance—in several important ways. The most direct of these is the pricing response of exporters and importers, which leads to changes in export and import prices and thereby to likely changes in the volume of exports and imports. A second, less direct, in-

VALUING UNITED STATES IMPORTS

Beginning in January, 1974, the Bureau of the Census began publishing two sets of data for United States imports (and hence for the United States trade balance). In addition to the so-called f.a.s. or customs value (representing "the transaction value of imports at the foreign port of exportation"), the data also show the so-called c.i.f. value (which includes "all freight, insurance, and other charges. . .incurred in bringing the merchandise from the country of exportation and placing it alongside the carrier at the first port of entry in the United States").

Some members of Congress had long argued for the second method of compilation—which is used by most other countries—as providing "more meaningful trade statistics for use in developing legislation and assessing our trade position." At the time the changeover was announced, the chairman of the United States Tariff Commission noted that the new data would be "of great help in analyzing the competitive position of the United States in relation to imports and in comparing on a common base the trade of the United States in relation with that of other countries."

The extent to which United States trade statistics have become more comparable with those of our major trading partners is questionable, however—largely because of the difference in absolute magnitudes. Thus, whether United States imports for 1982 are given as $243.9 billion (f.a.s.) or as $254.9 billion (c.i.f.) adds little refinement to a comparison with that year's imports (c.i.f.) of West Germany ($15.4 billion), Japan ($131. 5 billion), or the United Kingdom ($99.6 billion).

There is even some danger in looking only at the c.i.f. figures. To the extent that freight and insurance services connected with United States imports are supplied by U.S. firms, they do not represent international transactions and, hence, do not generate "outflows" of dollars or additional accumulations of dollars to foreign owners. In other words, measuring imports on a c.i.f. basis is tantamount to implying that the United States provides none of the associated services.

Yet, the monthly trade data that are seized upon so eagerly by the media are on a c.i.f. basis; the corresponding f.a.s. data are released only 48 hours later and generally are not reported by the press. The published United States trade deficit vis-à-vis the rest of the world thus tends to be overstated each month, and the difference between the two sets of data on an annual basis becomes considerable (see tabulation). The assertion that the growth in the trade deficit will eventually have to weaken the dollar is, therefore, based on figures that do not entirely represent dollars going to foreigners. In addition, that allegation—which says that trade deficits cannot continue at present levels and that export earnings are needed to pay our import bill—is a myth. It ignores not only the role of service receipts (particularly the income on United States direct foreign investment), but also the fact that exchange rates reflect not only merchandise and services trade but financial flows as well.

United States Trade Balance ($ billion)

	f.a.s.	c.i.f.
1974	— 4.5	—12.8
1975	+ 9.1	+ 1.8
1976	— 8.3	—17.3
1977	—26.5	—36.4
1978	—28.5	—39.6
1979	—24.6	—37.2
1980	—24.2	—36.4
1981	—27.3	—39.7
1982	—31.8	—42.7
1983	—57.6	—69.4

fluence is on domestic prices, since exchange-rate changes lead to changes in the cost of imported materials and in the prices of import-competing goods. In turn, such domestic price adjustments eventually reflect back onto trade flows. As one author has written: "Exchange rate movements. . .bring about a chain of decisions by producers, consumers and investors on whether to purchase foreign or domestic goods and whether to invest at home or abroad. Beyond that, however, no hard-and-fast rules can be laid down about these decisions."'[1]

In very general terms, there are an infinite number of possibilities. What happens to exports when a country's currency falls or depreciates? Domestic producers might keep their prices unchanged, which would translate into lower foreign-currency prices for their goods and tend to stimulate export sales. Or they might raise their domestic prices and leave foreign-currency prices unchanged—which would yield them greater profits, but would not increase export sales.

What happens to imports when a currency depreciates? A relatively small country faces a given level of world prices for most of what it buys abroad; prices of those goods would rise (in local currency) and consumers probably would reduce their purchases. By how much, would depend on their responsiveness—the so-called elasticity—to price changes. But if importers and consumers should decide that the exchange-rate decline was likely to continue, they might well increase their purchases of foreign goods (to beat further price rises) and imports would actually increase.

The impact of exchange-rate changes on the overall economy also depends on the state of that economy, as well as on official economic policies. Thus when domestic output and employment are below their potential, a decline in a country's currency may well stimulate increased production in export and import-competing industries. But if the economy is near or at its full potential, or if the government is applying stimulative fiscal and monetary policies, then a falling exchange rate would merely add to domestic inflationary pressures.

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[1] Roger M. Kubarych, *Foreign Exchange Markets in the United States.* Federal Reserve Bank of New York, 1978, p. 46.

The effects of an appreciating or strengthening currency, such as the U.S. dollar over the past few years, are similarly complex and hard to generalize. They can be analyzed in terms of their "pass-through"—that is, the extent to which a higher exchange rate affects export and import prices. For example, if the prices charged by foreign exporters to their United States customers are set in terms of foreign currency, these prices would fall in dollar terms—potentially, by the full amount of the dollar appreciation. In that case, the appreciation would be passed through fully, as appears to have occurred for a number of foreign products. A French producer of crystal was able to increase its United States sales by 46 percent in 1983, and the company's export director was quoted by *The Wall Street Journal* as saying: "The exchange rate allowed us to keep [local-currency] prices stable over twelve months, which is essential when you're selling through catalogs."

On the other hand, if foreign suppliers' prices are set in dollar terms, those prices would remain unchanged and there would be no pass-through. However, keeping its dollar prices stable reportedly enabled Jaguar, the British car maker, to sell 50 percent more cars in the United States last year than in 1982—and increase profit margins at the same time. Alternatively, foreign exporters would stand to gain even if they raised their foreign-currency prices or reduced their dollar prices, as long as such a change was smaller than the appreciation of the dollar.

In practice, however, as a student of the phenomenon wrote recently; ". . .a mixture of these examples takes place. That is, the prices of some imports are essentially fixed in dollar terms, the dollar prices of other imports change by the full amount of any exchange-rate change, and the dollar prices of still others reflect a partial pass-through of any exchange-rate change."[2] He also pointed out that such a pass-through tended to be higher in industries in which sales and market-share objectives are particularly important. By contrast, a lower pass-through could normally be assumed to occur in sectors in which the United States has a major market share, either as producer or consumer, or which produce fairly homogeneous commodities, such as agricultural products or major raw materials. Prices for the latter are generally quoted in dollars and are determined on world markets.

Still, as mentioned, no hard-and-fast rules can be laid down. Thus, in a recent study of the impact of the strong dollar on trade in six major products the United States International Trade Commission concluded "that the assumption that trade in primary homogeneous products is generally more sensitive to exchange-rate changes than is trade in heterogeneous products is not necessarily correct."[3] The Commission's analysis indicated that trade in such primary products as magnesium and polyester staple fiber might not be more exchange-rate sensitive than trade in intermediate goods, such as denim and brass strip, or in such consumer goods as bicycles and pianos.

Since an appreciation of the dollar translates into a greater amount of foreign currency per dollar than before, on the export side the crucial element is the extent to which such an exchange-rate change is not passed through to the foreign buyer. In order to maintain sales and market shares abroad, United States exporters would have to counter a dollar appreciation by reducing their dollar quotations in markets that are especially price-sensitive, or in which other foreign suppliers offer strong competition. This would be the case for a wide range of manufactured products. As an alternative to reducing its dollar prices, one major United States manufacturing company reportedly was increasingly quoting prices on products from its foreign affiliates to its overseas customers. (A spokesman stated that this strategy also was motivated, in part, by the greater availability of export financing abroad.)

On the other hand, where foreign demand is less likely to respond to price changes or where other suppliers are unlikely to have an edge, United States exporters might keep their dollar prices unchanged without losing a substantial amount of sales. In that case, the pass-through would be complete.

How Much Does the U.S. Economy Depend on Exports?

The growing economic interdependence among countries has brought with it a significant increase in the "openness" of the United States economy and, therefore, in its sensitivity to influences emanating from abroad. The ratio of U.S. merchandise trade (exports plus imports) to gross national product doubled between 1970 and 1980—a far larger percentage increase than for any other industrial country, although it started very small. The ratio of foreign trade (broadly defined) to GNP—that is, including both goods and services—rose from 10 to 25 percent over the same period. Over most of the post-World War II period, world trade generally has tended to increase faster than economic activity, so that it is not unreasonable to assume that United States merchandise exports and imports combined will come to equal between 25 and 30 percent of GNP by the end of the current decade.

These comparisons are, of course, somewhat artificial since much of what goes into gross national product can-

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[2] Robert A. Feldman, "Dollar Appreciation, Foreign Trade, and the U.S. Economy," Federal Reserve Bank of New York, *Quarterly Review*, Summer, 1982, p. 4.

[3] United States International Trade Commission, *The Effect of Changes in the Value of the U.S. Dollar on Trade in Selected Commodities*. Washington, D.C.: USITC Publication 1423, September, 1983, pp. 2-3.

Table 1: Exports and the U.S. Economy

Year	Total GNP	Net exports	"Domestic" GNP	Change in Total GNP	Change in "Domestic" GNP
	(Billions of 1972 dollars)			(Percent)	
1980	1,475.0	50.3	1,424.7		
1981	1,513.8	43.0	1,470.8	+2.6	+3.2
1982	1,485.4	28.9	1,456.5	—1.9	—1.0
1983	1,535.1	12.6	1,522.5	+3.3	+4.5

Source: U.S. Department of Commerce

not be exported (or, in the economist's language, is "nontradable")—for instance, haircuts and residential construction. A much more meaningful indicator is, therefore, the ratio of merchandise exports to production of all goods—which reached a respectable 25 percent in 1982.

The actual influence of exports, and hence of the export decline in 1982 and 1983, on overall economic activity is somewhat more complex. The international position of the United States enters into the national accounts through the category of "net exports of goods and services," that is, the difference between total exports and imports of goods and services. Over the years, the contribution of that category to GNP has fluctuated considerably. In the past three years, the decline in net exports of goods and services had a sharply negative impact on total GNP. (see Table 1.) In 1981 and 1983, it lowered the domestic component of the real GNP increase by 0.6 percent and 1.2 percent, respectively. In 1982, the fall in net exports contributed 0.9 percent to the overall GNP decline.[4] Or, as Federal Reserve Chairman Volcker told the House Banking Committee in February: "It is the exporter, and those competing directly with imports, that have not shared at all proportionately in the recovery."

The relation between exports and employment has been well documented. A 1982 Commerce Department survey, *Origin of Exports of Manufactured Products* (drawn from the Department's *Annual Survey of Manufactures for 1980),* traced the contribution made by exports to both manufacturing activity (shipments) and employment by major industries and by states. According to the report, in 1980 there were 4.8 million jobs in the United States *related* to the export of manufactured goods. These represented 5 percent of total civilian employment and 6 percent of employment in the private sector.

Of the 4.8 million jobs, 2.8 million were in manufacturing plants per se, and another 1.9 million in nonmanufacturing establishments supplying materials and services to the ultimate manufacturers. The 2.8 million, in turn, included 1.5 million jobs producing manufactured goods for direct export and 1.3 million jobs in other manufacturing plants that contributed parts and components.

The 1.9 million workers in nonmanufacturing activities that support manufactures exports included jobs in trade, business, transportation, communications, utilities, agriculture, mining and other industries (see box). Wholesale and retail trade accounted for more than three-quarters of a million jobs in support of manufactures exports, and business services for another one-third of a million.

For the manufacturing sector and its supporting industries combined, the Department of Commerce found that exports accounted for 14.1 percent of total shipments and 14.7 percent of total employment. Of the 20 major industry groups classified in manufacturing, nonelectric machinery recorded the largest number of export-related jobs (526,200), with electric and electronic equipment ranking second (343,300). The industry group with the largest percentage of employment associated with exports was tobacco products (27.2 percent).

On a geographic basis, the Commerce Department estimates found the largest number of export-related jobs in California (518,000), with New York ranking second (388,100). As a share of total civilian employment, Rhode Island and Connecticut (with 7.5 and 7.2 percent, respectively) had the highest proportion of jobs related to manufactures exports.

In an even more recent study, *Domestic Employment Generated by United States Exports,* the Commerce Department found that United States exports in 1982 generated a total 4.9 million jobs in *all* sectors of the economy, as against 6.2 million in 1980. This study found that, in 1982, each $1 billion of exports was responsible for an average of 25,200 jobs. A similar calculation for 1980 would yield an average of 28,100 jobs per $1 billion of exports. Not only were exports lower in 1982, but both inflation and rising productivity had reduced the actual number of jobs required to support the same amount of exports that year. The 1982 exports-jobs ratio can be applied provisionally to 1983, which was characterized by a low inflation rate and no significant gain in productivity. Last year's $11.7 billion export decline may then be estimated to have caused the loss of approximately 295,000 jobs.[5]

The Commerce Department's more recent study also found that changes in United States export-related jobs

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[4] In the fourth quarter of 1983 alone, an $8.6 billion drop in net exports (annual rate) reduced the economy's growth rate to 5.0 percent, from a potential 7.2 percent.

[5] Yet, in 1983 the overall U.S. unemployment rate dropped 2.5 percentage points, the sharpest one-year decline in 30 years, and civilian employment reached a record 102 million. Moreover, rising imports also create jobs. Although the total cannot be easily verified, the imported-car industry alone accounts for some 194,000 jobs.

EXPORT-SUPPORTING ACTIVITIES IN THE NONMANUFACTURING SECTOR

In addition to including employment in manufacturing establishments that supply materials and parts for the production of manufactured exports, the indirect estimates in this report include employees in nonmanufacturing, such as farms and mines that provide materials inputs to manufacturing, plus various types of services required to nonmanufacturing industries in producing the manufactured goods to be exported, such as electricity, repair services, business services, transportation, utilities, etc.

Also taken into account. . .are employees associated with inputs to the business supplying these goods and services to the final manufacturers of the exported goods, and so on. Thus, the indirect estimates include the employment associated with steel and electricity entering the production of an automobile for export, the coal used by the steel mill and electric utility, the transportation of the coal, the fuel and repair shops, etc. The data also include estimates of employment associated with transporting the manufactured goods from "plant to port" and the employment of exporting establishments that purchase and resell the goods to foreigners or arrange their sales abroad. It should be emphasized again that the employment estimates relate only to the export of manufactured goods and exclude employment related to the export of other goods and services. They do not, therefore, measure the full employment effect of all U.S. exports.

U.S. Department of Commerce, *Origin of Exports of Manufactured Products*, January 1982.

have a greater-than-proportionate effect on overall employment in the United States. Thus, the increase in export-related employment in manufacturing between 1977 and 1980 equaled 80 percent of the rise in total manufacturing employment and 30 percent of the rise in total employment in the private sector. Conversely, the 20 percent drop in export-related employment between 1980 and 1982 accounted for 40 percent of the increase in total U.S. unemployment between the two years.

Export-related employment, not surprisingly, is most important in manufacturing. In 1980, 49 percent of such employment was in manufacturing industries, 14 percent in the nonmanufacturing sector, and 37 percent in the services industries. Even at the reduced 1982 level, exports continued to contribute powerfully to total employment levels: They generated one out of eight jobs in manufacturing, one out of six in nonmanufacturing, and one out of thirty in services. For the private sector as a whole, they accounted for 6 percent of total United States employment.

How Have U.S. Exports Compared to World Trade?

The depressed state of the world economy certainly has tended to contribute to the poor United States trade performance of the past few years. World trade did, indeed, decline in both 1981 and 1982. But, as has also been said, some of our major competitors, such as Germany and Canada, did better in 1982 than in the previous year, although they faced the same economic conditions worldwide as did the United States. And the United States recorded an almost $40 billion deficit in trade in manufactures last year, while West Germany had an estimated $75 billion surplus on such trade and Japan one of $110 billion.

The data show clearly that the United States share of world exports has declined since 1970, while the shares of our major competitors have remained fairly constant or have risen. For manufacturing exports alone, the United States share has also fallen noticeably, while other major exporters have either maintained or increased their shares.

However, these data are based on dollar values and include the exports of other countries converted into dollars from local currencies. Thus, as the exports of countries whose currencies appreciated against the dollar in the late 1970's are converted, the conversion process itself boosts the dollar value of their exports. This, in turn, increases these countries' market shares and reduces the U.S. share without, as Fred Bergsten pointed out to the National Foreign Trade Council in 1980, "their exporting a single extra Volkswagen or Toyota." The commonly used statistical series, based on dollar values, can, therefore, give a somewhat misleading impression of changes in the international competitive position of the major countries.

A different picture emerges when the market share data are computed in real terms—that is, in volume terms or by dividing nominal export values by an export price index. On the basis of volume data, the U.S. world market share rose over the 1970's. In fact, the very strong growth in export volume in 1978 and 1979 as a result of the weak dollar resulted in a market share that was a full percentage point higher in 1979 than at the low reached in 1972.

The converse is, of course, true for the more recent years when the dollar strengthened, so that foreign countries' exports (in domestic currencies) translate into fewer dollars. Thus, what in nominal terms appears to be a slight increase in U.S. market shares in the 1980-1982 period actually (and not surprisingly) shows up as a declining share in real terms.

Table 2 examines the decline in the U.S. share of world trade from a slightly different view that takes into account the relatively slower growth of the U.S. economy. The upper half of the table gives U.S. exports, both overall and of manufactures, as a share of the exports of the 15 major industrial countries. This conclusively indicates the

Table 2: Export Market Shares

	1970	1975	1980	1981	1982	1983
				(Percent)		
Shares of industrial countries' exports						
						(Jan.-Sept.)
United States	19.6%	19.0	17.9	19.2	18.5	17.8
Germany	15.5	15.9	15.6	14.4	15.4	15.0
United Kingdom	8.9	7.8	8.9	8.4	8.4	7.7
Canada	7.4	6.0	5.5	5.9	6.2	6.6
Japan	8.7	9.8	10.6	12.4	12.0	12.7
Shares of industrial countries' exports of manufactures						
						(Jan.-June)
United States	17.4%	16.3	15.5	16.9	16.2	15.6
Germany	18.1	18.3	17.9	16.5	17.6	17.5
United Kingdom	9.7	8.4	9.2	7.6	7.6	7.0
Canada	5.7	3.8	3.7	4.2	3.7	4.4
Japan	10.7	12.2	13.3	16.0	15.6	15.7
United States share of industrial countries' GNP	50.2%	40.8%	34.8%	41.7%	41.1%	
				(1970 = 100)		
U.S. export share	100.0	96.9	91.3	97.9	94.4	90.8
U.S. share of manufactures exports	100.0	93.7	89.1	97.1	93.1	89.7
U.S. share of industrial countries' GNP	100.0	81.3	69.3	83.1	81.9	
U.S. export share adjusted for GNP share	100.0	119.2	131.7	117.8	115.3	
U.S. share of manufactures exports adjusted for GNP share	100.0	115.3	128.6	116.8	113.7	

Sources: Council of Economic Advisers; International Monetary Fund; United Nations; The Conference Board.

noticeable decline in the 1970's (and the slight rebound in the early 1980's). However, during the 1970's the other major industrial countries had, on average, higher economic growth rates than the United States. Thus, as the table also indicates, the U.S. share of the GNP of the industrial countries as a group fell from about 50 percent in 1970 to 35 percent in 1980.

These data can be interpreted to mean, paradoxically, that more rapid economic growth abroad may actually have contributed to the decline in U.S. export market shares. In fact, when the export data are adjusted (lower half of table) to allow for the declining United States share of the combined GNP of the major industrial countries, the United States market share—both for total exports and, to a lesser degree, for exports of manufactures—was (and has remained) above the 1970 level. This could suggest that the relatively slower growth of the U.S. economy relative to the rest of the industrial world resulted in a declining market share for United States exports. In other words, a more slowly growing economy tended to generate slower export growth.

How Has Third-World Debt Affected U.S. Exports?

The most noticeable effect of the developing countries' debt crisis on United States exports can be seen in the case of Latin America. That area—which normally constitutes a market for between 15 and 18 percent of United States goods—at the end of 1983 accounted for 37 percent of the external debt of all nonoil-developing countries.

The effects of the Latin American debt crisis have been felt sharply by U.S. exporters. Between 1978 and 1981, United States exports to Latin America had grown more than 50 percent faster than U.S. exports to the rest of the world—so that the declines in the past two years had a pronounced impact on overall U.S. export performance. The nearly $9 billion drop in United States sales to Latin America in 1982 accounted for over 40 percent of the total decline in United States exports that year. The 1983 drop of $7.4 billion was almost two-thirds of the total export decline of $11.7 billion. In both years, moreover, Latin America's imports from the United States fell faster than the decline in Latin American imports from the world as a whole.

Mexico, which is this country's third largest trading partner and accounts for nearly half of our exports to Latin America, was among the first of the major Latin American countries to curtail its imports because of financial difficulties. While United States exports to Argentina also fell sharply in 1982, the full impact of the economic contraction in Brazil, Venezuela and most of the other countries made itself felt only last year.

The decline in exports to Latin America since 1981 has affected every major category of United States exports (Table 3), but has been particularly pronounced in machinery, transport equipment, and in the general category of "other manufactured goods." Basic iron and steel product exports were almost cut in half in 1982 and suffered further inroads last year. Thus, several major industries that were already hard hit by the recession in the United States also suffered some of the sharpest declines in exports to Latin America.

While high-technology products were not hit as hard by retrenchment measures in Latin America at first, by the first half of 1983 exports of scientific and business machinery and of computers were also down between 20 and 40 percent from a year earlier. Even exports of agricultural products—long the mainstay of United States sales abroad—have been affected (although here good crops in Mexico and Brazil also played a part). But many somewhat unusual items also have become casualties of economic austerity measures. As *The Economist* reported last September: "Imported American turkey is off the menu in Quito, Santiago and Bogota; salmon is scarce in Mexico City and Lima; Hawaiian pineapples are absent from fruit-stalls in Buenos Aires. . .Exports of communion wafers from the United States to Latin America [also] have stopped."[6]

Using recent Commerce Department estimates of the relation between United States exports and employment, the $9 billion loss in exports to Latin America in 1982 may have caused the loss of approximately 225,000 United States jobs in that year. More than three-quarters of this loss is estimated to have taken place in the machinery, transport equipment, and other manufactured goods sectors—where unemployment in 1982 already was higher than the average for all sectors. The further export decline of $7.4 billion last year thus may have led to a further loss of about 185,000 jobs.

Table 3: United States Exports to Latin America (billions of dollars)

	1981	*1982*	*1983*
Total	38.9	30.0	22.6
Mexico	17.8	11.8	9.1
Venezuela	5.4	5.2	2.8
Brazil	3.8	3.4	2.6
Argentina	2.2	1.3	0.9
Food and animals	4.7	2.8	3.6
Chemicals	4.5	3.7	3.3
Machinery	12.3	9.7	6.1
Transport equipment	5.4	3.3	2.0
Other manufactures	7.5	5.4	1.6
Business machinery	1.9	1.6	0.7
Iron and steel products	1.1	0.6	0.3

Source: U.S. Department of Commerce

How Have Declining Oil Revenues Affected U.S. Exports?

Declining oil revenues had a dramatic effect on the revenues of OPEC (as well as of non-OPEC) producers last year. With oil prices down by $5 per barrel on average and OPEC production almost 1 million barrels-per-day less than in 1982, the group's oil revenues were estimated to have been about $50 billion lower. This, in turn, has led to a remarkable deterioration of OPEC's current account—to deficits of $8 billion and $30 billion in 1982 and 1983, respectively—and has forced several member countries to curtail their imports.

For the time being, sizable holdings of financial reserves, reflecting the earlier surplus years, did provide a cushion that permitted several OPEC countries to avoid financial retrenchment. Nevertheless, some, such as Venezuela, began to face serious problems, while others, such as Indonesia and Nigeria, had to make substantial economic and financial cutbacks. Even Saudi Arabia, with an estimated $160 billion in reserves in early 1983, moved into deficit during the year.

Overall, the OPEC countries were able to maintain their 1982 imports at the previous year's level, although reducing their imports from the United States slightly. During the first nine months of last year, however, the group's purchases from this country fell three times as fast as their imports from the world as a whole (see Table 4).

Table 4: OPEC Imports

					Change	
	1980	*1981*	*1982*	*1983 (Jan.-Sept.)*	*1982/1981*	*Jan.-Sept. 1983/1982*
		(billions of $)			*(Percent)*	
Total	131.4	153.5	154.1	106.1	0.4%	— 7.7%
From United States	17.8	21.5	10.7	13.0	—3.7	—24.8

Sources: International Monetary Fund; U.S. Department of Commerce

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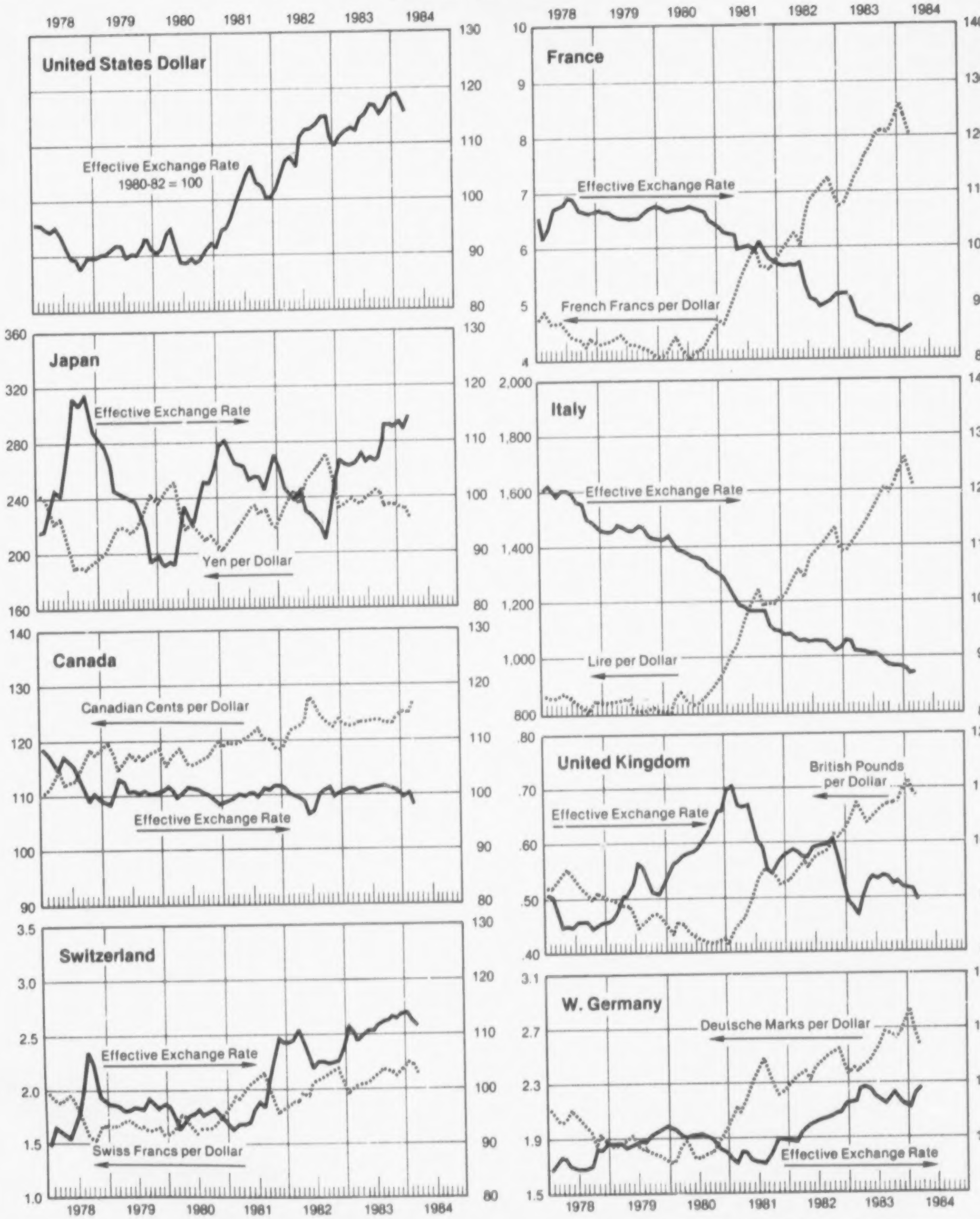
[6] "Bring Your Own," *The Economist*, September 10, 1983, p. 68.

Chart 1

Foreign Exchange Rates

Indexes: 1980-82 = 100



Note: Nominal Effective Exchange Rates: Index numbers 1980-82 = 100. Each index shows a currency's trade-weighted appreciation or depreciation measured against fifteen other major currencies using averages of daily noon spot exchange rates in New York and bilateral trade weights based on 1980 trade in manufactures.

Source: Morgan Guaranty Trust Co.

How Have U.S. Exports to Major Industrial Countries Fared?

Over the last two to three years, the dollar has strengthened most against the currencies of some of the major industrial countries—such as the German mark, the yen, the pound, and the French franc (Chart 1). As was pointed out above, changes in exchange rates can—and do—have a mixed effect on actual merchandise trade. Some prices of traded goods may be fixed in dollar terms, some may change by the full amount of the rate change, and some may reflect only a partial "pass-through."

There is, in fact, very little direct correlation between percentage changes in the value of the dollar against specific currencies, on the one hand, and in the trade balance with those countries, on the other. For example, from 1981 to 1982 the dollar appreciated by 21 percent against the French franc, but the United States trade balance with France improved slightly. At the same time, a 7-percent appreciation of the dollar against the West German mark coincided with a considerable worsening of the U.S. trade balance with West Germany.

In addition, the recent analysis by the United States International Trade Commission notes "that exchange-rate movements cannot always be assumed to be the predominant factor which determines changes in trade flows with respect to any individual product.[1]" Such a direct relationship is muddied by other factors, including domestic price changes, competition from substitute products, constraints on supply, limited access to markets, transactions between related parties, and changes in both product demand and consumer preferences. All these, the Commission suggests, can have equal, or even greater, impact on trade flows than the exchange rate itself.

Moreover, even when exchange-rate changes do affect trade flows they can be expected to do so with some lag. Some earlier studies, done in the 1970's, had indicated that these adjustment lags might be rather lengthy, with one analysis finding an average lag of one and three-quarter years (implying a total adjustment period of up to three-and-a-half years) and another finding total lags of up to five years. More recent work by a major New York investment firm has suggested an overall lag between rate changes and trade-flow changes of two-and-a-half years, with half of the effect occurring in fifteen months.

An additional factor bearing on United States trade at this juncture is the difference in timing of the recovery in the United States and in the other major industrial countries, with the latter group lagging behind. Thus, in mid-1983, the OECD saw the prospect for recovery "most solid for the United States," while Europe at that point remained "the most uncertain area," and a slow pickup to modest growth there could not yet "be said to be unequivocally under way." Prospects looked more firm by the year-end, according to the OECD, with recovery "well under way in the United States" and Japan "looking more buoyant." For Europe, however, the recovery still was likely to be "more modest and perhaps also more fragile."

This difference is borne out strongly by the leading indicators, computed by the Center for International Business Cycle Research at Columbia University. In the twelve months through October 1983, the leading indicator for the United States had advanced by eight points, or eight percent, while for four major European countries—France, Germany, Italy and the United Kingdom—the combined advance had been only one point, or one percent.

These cyclical differences, combined with the fall in European currencies against the dollar, have more than wiped out the traditional (and substantial) U.S. trade surplus with Europe. At the height of the last export boom, in 1980, the U.S. surplus with the European Community ($17.2 billion) more than offset our trade deficit with Japan ($9.9 billion). But the United States is now running substantial deficits with all major European countries, and was barely in balance on its 1983 trade with the Community as a whole.

Some simple calculations by The Conference Board indicate that for the major industrial countries there has, indeed, been some fairly close correspondence between the strengthening of the dollar and United States exports to those countries. Chart 2 depicts quarterly changes since the beginning of 1981, with 1980 taken as the base year.

The upper left-hand panel plots the behavior of total United States nonagricultural exports against changes in the value of the dollar. The solid line represents the *ratio* of nonagricultural exports to the combined coincident indicators for six major foreign countries—Canada, France, Germany, Italy, the United Kingdom, and Japan. These indicators, which also are computed by the Center for International Business Cycle Research, are composites of such variables as real GNP, industrial production, employment and retail sales, and generally define where an economy "is at." Adjusting U.S. exports by changes in economic activity in these major countries takes account, in a sense, of variations in the market share of United States exports. (For example, if economic activity abroad declined while United States exports were unchanged, one might say that the United States market share had increased, and vice versa.) The broken line tracks the trade-weighted value of the dollar in terms of 15 major currencies.

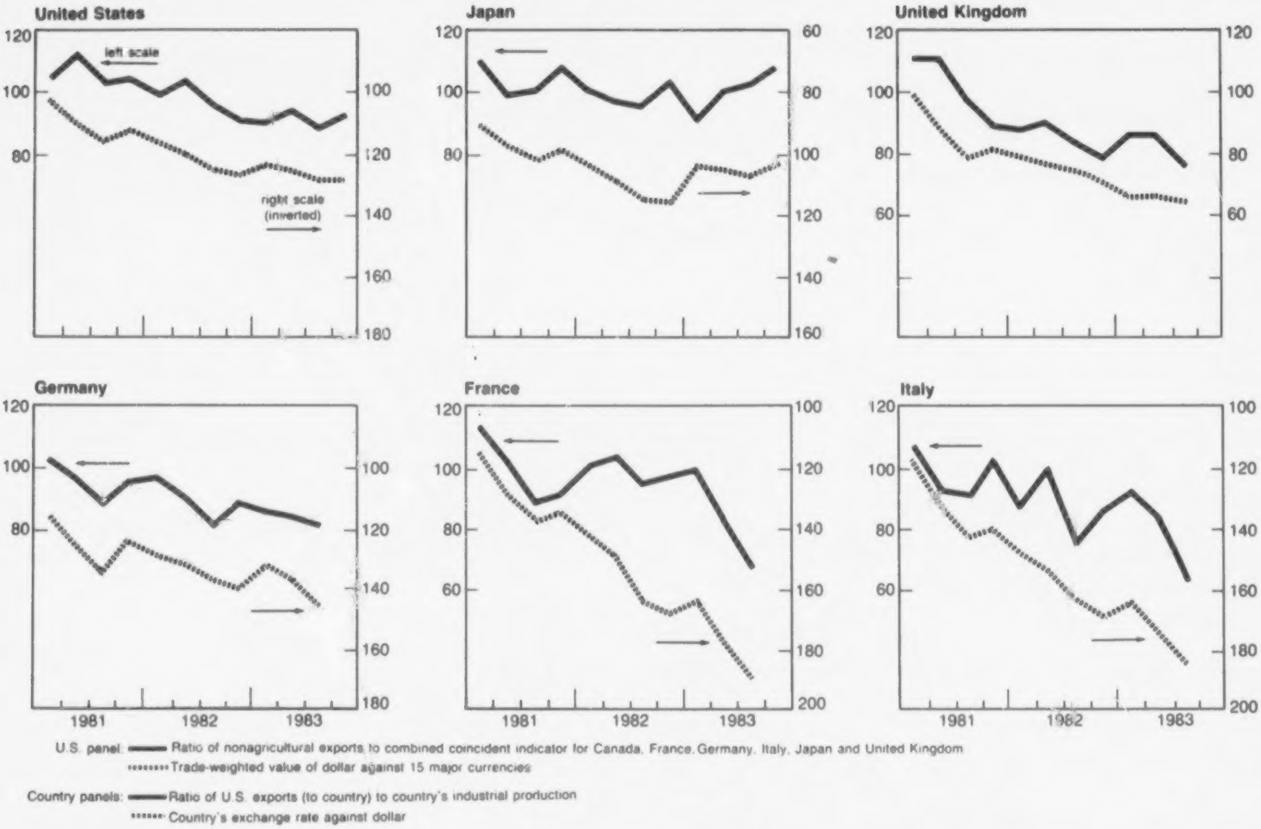
The five country panels are similarly arranged to show, the *ratio* of total United States exports to that country's industrial production (solid line), and the country's exchange rate against the dollar (broken line).

[1] U.S. International Trade Commission, 1983, p. 2.

Chart 2

U.S. Exports and the Dollar

1980 = 100



U.S. panel: ━━ Ratio of nonagricultural exports to combined coincident indicator for Canada, France, Germany, Italy, Japan and United Kingdom

•••••••• Trade-weighted value of dollar against 15 major currencies

Country panels: ━━ Ratio of U.S. exports (to country) to country's industrial production

•••••• Country's exchange rate against dollar

Sources: Center for International Business Cycle Research; International Monetary Fund; Morgan Guaranty Trust Company; U.S. Department of Commerce; The Conference Board

How Will Exports Fare in 1984?

In attempting to project the course of United States exports in 1984, a number of commentators have pointed to what they consider the inevitable weakening of the dollar this year and thus to a turnaround, or at least an improvement, in the United States trade accounts. But as the preceding discussion has shown, the decline in U.S. exports over the last two years or so is only partly related to the strength of the dollar. Factors other than the dollar that have affected our exports adversely are likely to continue exerting their influence, at least for the remainder of 1984.

First and foremost, the cyclical divergence between the United States and Western Europe is likely to persist. As the Conference Board's *International Economic Scoreboard* noted at the beginning of the year: "In Europe. . .the recovery is developing more gradually than in North America and Japan. The combined leading index for France, West Germany, Italy and the United Kingdom was rising at an annual rate of 6 percent in October [1983] while the leading index covering the United States, Canada and Japan was climbing at a 15 percent rate." In February, the *Scoreboard* noted that "all countries except Italy seem to have turned the corner."

This cyclical divergence has a further and longer-range implication. According to some recent research, for each 1 percent increase in United States output, U.S. imports of manufactures tend to increase by 3.1 percent. By contrast, for each 1 percent increase in output in the rest of the world, U.S. exports of manufactures tend to increase by only 1.3 percent. Thus, even if United States manufactures exports and imports initially were equal in value, to keep the balance from deteriorating either the U.S. growth rate would have to be about one-third of that in the rest of the world, or the relative price of United States goods would have to decline substantially.[1]

Second, while the debt situation of the developing countries, most importantly those in Latin America, currently is under control, it is not going to be resolved in a period as short as a year. The borrowing requirements of the

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[1] Robert Z. Lawrence, "U.S. International Competitiveness." Joint Economic Committee of the Congress, *U.S. International Economic Policy in the 1980's*. 97 Cong., 2nd sess. Government Printing Office, February, 1982, p. 74.

LDC's will remain quite high for some time to come, necessitating substantial financial flows from banks and international financial institutions as well as continued retrenchment at home. Only strong and continued growth in the industrial world will give these countries the chance to resolve their debt problems satisfactorily. Nor does it appear likely that oil prices will shoot up once more to levels that would permit the OPEC countries to become substantial buyers of United States products. (This would hold true even if oil supplies from the Persian Gulf were temporarily disrupted.)

As to the dollar itself, most analysts agreed early this year that any weakening in 1978 would be slight—amounting to no more than between 10 and 15 percent on a trade-weighted basis (i.e., against a basket of 15 major currencies). But it needs to be stressed that close to 40 percent of U.S. exports go to four markets—Canada, Japan, Mexico and the United Kingdom. The currencies of those four countries are unlikely to strengthen against the dollar by as much as 10 or 15 percent.

At the Conference Board's annual Financial Conference in February, one speaker asked: "Can any company export today?" He went on: "The answer for most United States firms is pretty clear. . .only with difficulty. Yet, final results for 1983 also confirm that many are still exporting, even as others suffer collapse in orders and shipments." He then outlined other elements of the "marketing mix" that he saw as becoming increasingly important in the face of a strong dollar: "A new or differentiated product; a more accommodative distribution system; or a better-targeted promotion. But each possible offset involves an upgrading of marketing budgets and more financial risk." It is clear, he concluded, "that few U.S. exporters can hope for any repeat of success stories of the 1970's variety without extraordinarily hard work."

That is not to say, of course, that in the longer run a marked decline in the dollar cannot improve United States international competitiveness again. Thus, during 1978-1980, when the dollar fell sharply, U.S. exports grew at double the rate of world trade generally, and actually recaptured the share of world exports of manufactures that had been lost earlier in that decade. That episode has also been interpreted by some as providing a powerful counterargument to the view that this country is being "deindustrialized" because its industries cannot compete internationally.

In terms of the overall economy, moreover, the 1978-1980 period saw a broad surge in "net exports," which, in turn, contributed to the strength of real GNP—just as that category fell dramatically in 1981-1983 and thereby affected overall economic activity. Thus, in the long run, one must attach considerable significance to changes in the value of the dollar and its influence on both the trade and national accounts.

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Research Bulletin

U.S. Regional Outlook 1984-1985

Summary of a February 1984
Meeting of The Conference Board's
Regional Economic Forum

The Conference Board

number 161

The Conference Board's Sixth Annual Regional Economic Forum met in February 1984, gathering nine experts from around the country. The Forum's deliberations are summarized in this report.

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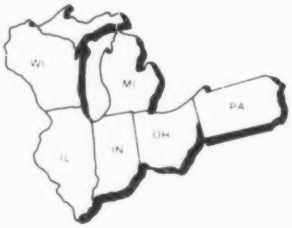
HIGHLIGHTS

The pace of recovery in *New England* is similar to that in the country as a whole, but the composition is quite different—in good part because New England manufacturing jobs are disproportionately tied to business investment and to export markets, and recovery in these activities is lagging behind the overall upturn. However, provided that the national expansion continues, New England's job growth in the next two years is more likely to be limited by a tight labor supply than by weak demand.

NEW ENGLAND

ME
VT
NH
MA
CT
RI

INDUSTRIAL HEARTLAND

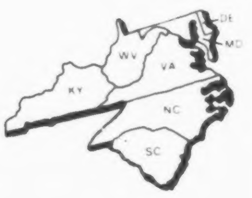


A solid upturn in the *Industrial Heartland* has been under way since late 1982, but employment is still nearly 1 million persons below the peak reached in 1979. The winds of fundamental structural change have buffeted the Heartland more than other regions. A sustained, broad-based national expansion is the key to a return to real economic health in the Heartland. Although the chances of achieving this are uncertain, the near-term prospects are favorable because national economic growth should be moderately strong in 1984, despite problems of international competitiveness and the federal deficit.

Economic recovery in the *Mid-Atlantic* region was slow to get started but began to pick up steam last Summer. This is fairly typical of the region, because its relatively low concentration of cyclically sensitive industries makes V-shaped recoveries rare. The strength of business capital spending was good for the region in 1983 and is an important positive factor in the outlook. On the assumption of solid growth in the national economy in 1984, the Mid-Atlantic region should easily top its 1983 performance. However, beyond 1984 the federal deficit poses a risk to prosperity both nationally and in the Mid-Atlantic.

MID-ATLANTIC

UPPER SOUTHEAST



In 1983, economic activity in the *Upper Southeast* rode the crest of the wave of residential construction and consumer spending that was driving the national recovery. The manufacture of building materials, textiles, furniture and appliances made major contributions to the region's recovery, and outweighed the negative effects of the deterioration in international trade. Prospects for 1984 are positive, although the staying power of the national recovery is a key question.

Economic activity in Florida and Georgia merely slowed during the national downturn, and has been expanding briskly in recovery. But the remainder of the *Lower Southeast*—Alabama, Mississippi and Tennessee—suffered more in the slump and has generally not fully recovered pre-slump levels of activity. The region will show above-average economic performance during the next two years, but the results will be significantly dominated by the strength in Georgia and Florida.

LOWER SOUTHEAST

TN
MS
AL
GA
FL

BEST AVAILABLE COPY

ND
MN
SD
IA
NE
KS
MO

AMERICA'S BREADBASKET

The farm recovery in the *Breadbasket* that began last year is expected to become stronger and broader in 1984. Sharp cuts in output of major crops, combined with larger government payments to farmers, turned farm income around in 1983, although livestock producers and agriculture-related businesses did not share in the recovery. In 1984, income growth will be more evenly distributed across United States agriculture, and financial conditions may improve somewhat. The outlook beyond 1984 is restrained, however, as excess crop capacity and weak export demand are likely to limit income growth.

The *Southwest* was slow to move into the recession and has been slow to recover. A good part of the reason for the late start of recession in the region is that the decline in the energy industries lagged the overall United States decline, and the generally slow recovery of these industries has dampened the region's upturn. In Texas, moreover, the problems of the Mexican economy have had significant ramifications.

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MOUNTAIN STATES

The latest recession was the worst slump the *Mountain* region has experienced in almost 30 years, and it lasted in the region for some months longer than in the nation as a whole. Once recovery began, however, it outran the national pace. The recession accelerated the structural changes already occurring in the Mountains, particularly the cutbacks in mining. Manufacturing is growing more important, but smokestack industries are relatively absent; the service sector is also growing. The region should have a good year in 1984. Even with a stagnant energy industry, it should remain the fastest growing part of the country.

Business activity has improved in most of the states comprising the *Pacific* region, and in most of its industries. There is a widespread feeling that 1984 will be another year of expansion, and confidence has rebounded even in the lumbering areas, which were extremely hard hit by the recession. Although prospects for 1984 are favorable, troubles can be expected here and there in 1985 as inflationary pressures and the federal deficit push up interest rates. A rise in rates would quickly hurt the interest-sensitive sectors of the economy, particularly housing. The years beyond 1984 are, unfortunately, fraught with uncertainty.

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Near-Term Recovery but an Uncertain Future

Lora S. Collins
The Conference Board, Inc.

Lora S. Collins

WHEN the 1984-1985 Regional Economic Forum met, the national economy had been expanding for more than a year. An economic uptrend was well established even in laggard regions, and the unquestioned fact of broad-based recovery set the tone of the Forum meeting. In a word, the Forum members were encouraged. Of course, the recovery follows a prolonged and deep slump in the early years of the decade. Some segments of the economy are, consequently, still well below former levels of activity, even though they have been rebounding briskly. In such cases—typified by the Industrial Heartland—the fact of recovery may seem somewhat obscured, but it is a fact nonetheless. Even the agricultural sector, burdened by heavy debt, weak prices, and soft export markets, is on a positive trajectory in 1984.

The Regional Economic Forum participants look for a rise of at least 4 percent in real economic activity, and quite possibly more than 5 percent, in 1984. But they are very tentative in their view of prospects beyond this year. The Forum members want to believe that a smooth, sustainable rate of economic growth will be achieved, but they are doubtful. Their uncertainty was most frequently voiced as a concern that rising interest rates will cut off economic expansion. The Forum's discussion suggested that this might happen either because very rapid economic growth in 1984 causes the Federal Reserve to adopt an increasingly restrictive credit stance, or because the federal deficit's absorption of the national savings pool will push the price of credit up further. The latter interpretation was the more common one among the Forum members.

The slump of the early 1980's was very severe. By the business-cycle chronology of the National Bureau of Economic Research, there were two recessions separated by a mere year of recovery from mid-1980 to mid-1981. In fact, the three years 1980 through 1982 were marked by a prolonged and painful policy-induced deflation both in the United States and in other major nations. This made for an environment considerably harsher than in past slumps, and caused the economic distress to be unusually pervasive. The worry among Forum members is that the pain of the early 1980's may prove to have been in vain. Their concern is that the nation has not succeeded in adopting a policy stance that will support growth and restrain inflation in the years beyond 1984.

For the time being, however, the economic news is unquestionably positive. The pressures of the early 1980's brought about widespread adjustments in technology, in capital-labor ratios, and in cost structures. These changes are paying off now that overall growth has resumed. Thus, while clearly worried about the longer run, the Forum participants see few problems in the immediate future. Echoing a sentiment heard in the business community generally, the Forum was much more inclined to speak of "opportunities" than of the barriers and difficulties that were the common theme of discussion two and three years ago.

New England

Lynn E. Browne*
Federal Reserve Bank of Boston

Lynn E. Browne

The pace of recovery in New England is similar to that in the country as a whole, but the composition of the recovery in the region is quite different. As of January, nonagricultural wage and salary employment in New England was 3.3 percent above the level at the trough of the recession in November, 1982. U.S. nonagricultural employment increased 3.5 percent over the same period. Within the region, New Hampshire and Rhode Island have enjoyed the strongest recovery. Rhode Island suffered the sharpest employment losses of all the New England states in the 1981-1982 recession, and New Hampshire the mildest. Thus, in Rhode Island, the relatively strong recovery seems to reflect a cyclical rebound; in New Hampshire, it reflects the underlying strength of the state's economy.

Although total nonagricultural employment has increased at approximately the same rate in New England as in the nation, nonmanufacturing employment has grown more rapidly in the region and manufacturing more slowly. The difference between U.S. and New England growth rates is more striking for manufacturing, but there are three to four times as many jobs in the nonmanufacturing sector. Within nonmanufacturing, the employment recovery in wholesale and retail trade and in construction has been stronger in New England than elsewhere. Although population growth in New England is low, years of sluggish housing construction combined with a relaively strong overall economic performance have created a pent-up demand for housing. Residential construction activity, as measured by housing permits, has recovered about as vigorously in New England as in the nation. Housing prices are rising sharply in parts of the region.

In contrast to nonmanufacturing, the recovery in manufacturing has been markedly slower in New England than in other regions. Durable goods industries account for most of the difference. In the 1981-1982 recession, the decline in durable goods employment was less severe in the New England states than nationally, but in the first 14 months of recovery, durable goods employment increased less than 3 percent in the region compared to 8½ percent nationwide. Employment growth in New England has lagged that in the nation in almost all major durable goods categories. However, the really big difference is in transportation equipment. The auto industry, which is a much larger employer in the country as a whole than in New England, is recovering very strongly; the aircraft industry, which is much more important to New England, continues to languish. Moreover, through relationships with suppliers, the strength in autos has spilled over to some of the metals and machinery industries, contributing to the faster growth in these activities outside New England.

The slow recovery of New England's durable goods industries recalls the region's experience in the 1975-1976 upturn. Fourteen months into the earlier recovery, durable goods employment in New England was less than 1 percent above the recession trough. The following year, employment in the region picked up sharply and, despite the slow start, the growth in New England's durable goods industries from 1975 to 1983 far surpassed that in the country as a whole. The growth in total employment matched that nationally.

Most analysts expect the New England states to do at least as well in the current recovery. This optimism is based on the composition of the region's manufacturing sector. A disproportionate share of manufacturing in New England is tied to business investment spending, which typically lags in recoveries, rather than to consumer durables and residential construction, which typically lead. Investment spending has fared somewhat better in this recovery than is usually the case, but real spending in 1983 still averaged 4 percent below the level of 1982. In 1984, however, the Bureau of Economic Analysis estimates that business plans to increase real investment spending by 12 percent. Spending by manufacturing is projected to rise 16 percent. These increases will be particularly welcome to such New England industries as process and control instruments, computers for industrial applications, machine tools, and specialized industrial machinery.

Exports account for a larger fraction of shipments from New England than from the nation, and New England manufacturers can expect to benefit from rising export sales in 1984. Manufacturers of instruments, office equipment, and computers are especially dependent on foreign markets. These markets have been extremely depressed, but are expected to improve over the next two years.

Finally, New England receives about 12 percent of all prime defense contract awards; in contrast, the region accounts for only 6 percent of U.S. nonagricultural employment. The real value of prime defense contracts has been

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*The views expressed are those of the author and do not necessarily represent those of the Federal Reserve Bank of Boston or the Federal Reserve System.

Table 1: Percent Changes in Nonfarm Wage and Salary Employment in Recessions and Recoveries—United States and New England

	Total	*Manufacturing*	*Durable Goods*	*Nondurable Goods*	*Non-manufacturing*
Recovery 11/70 - 1/72					
United States	3.0	1.3	2.4	-0.2	3.6
New England	0.1	-3.5	-5.0	-1.6	1.7
Recovery 3/75 - 5/76					
United States	3.6	4.2	3.1	5.8	3.4
New England	2.6	3.6	0.8	7.7	2.2
Recession 1/80 - 7/80					
United States	-1.2	-5.2	-6.8	-3.2	0.0
New England	-0.9	-2.9	-1.5	-5.2	-0.1
Recovery 7/80 - 7/81					
United States	2.0	2.9	3.7	1.7	1.8
New England	2.0	2.0	1.3	3.3	1.9
Recession 7/81 - 11/82					
United States	-3.0	-10.5	-13.5	-5.9	-0.8
New England	-2.2	-8.4	-9.2	-7.1	0.2
Connecticut	-1.6	-8.5	-10.9	-1.2	1.4
Maine	-2.8	-8.5	-9.5	-7.9	-0.7
Massachusetts	-2.2	-8.1	-8.5	-7.3	-0.3
New Hampshire	-1.3	-6.3	-5.4	-7.7	0.8
Rhode Island	-4.2	-12.6	-9.9	-14.6	-0.3
Vermont	-1.7	-7.1	-7.5	-6.0	0.1
Recovery 11/82 - 1/84					
United States	3.5	6.3	8.4	3.5	2.7
New England	3.3	2.5	2.9	1.8	3.6
Connecticut	2.7	0.6	0.0	2.3	3.5
Maine	2.2	1.6	4.3	0.4	2.4
Massachusetts	2.9	2.6	4.1	0.1	3.1
New Hampshire	8.0	8.0	8.4	7.2	8.1
Rhode Island	5.0	4.9	4.6	5.0	5.0
Vermont	2.0	1.3	1.2	1.4	2.3

rising since the mid-1970's. Increasing defense business undoubtedly played a role in New England's relatively strong performance in the 1980 and 1981-1982 recessions. However, there is often a considerable lag between the awarding of a defense contract and its effect on output and employment. Thus, the acceleration in defense procurement in the past several years has yet to be fully reflected in employment levels. The Department of Defense, however, is a very large and sometimes fickle customer. Contracts may be shifted from one manufacturer to another, creating difficulties for the losing contractor and its suppliers. Recently, General Electric won a one-year contract to produce engines for the F-16 fighter plane; Connecticut's United Technologies had previously been the sole supplier. The shift illustrates the uncertainties of the defense business even in a time of rapidly rising defense spending.

Apart from the possibility of an abbreviated national recovery, New England's employment growth over the next two years seems more likely to be limited by the supply of labor than by weak demand. Although the recovery in New England is only now beginning to pick up steam; unemployment rates in the region are about the same as before the recession. In January, the average unemploy-

Table 2: Unemployment Rate (percent)—United States and New England

	July 1981	*Nov. 1982*	*Sept. 1983*	*Dec. 1983*	*Jan. 1984*
United States	7.2	10.7	9.2	8.2	8.0
New England	6.3	7.8	6.5	5.8	5.9
Connecticut	6.0	7.5	5.4	4.7	4.7
Maine	7.1	7.8	8.2	8.0	8.1
Massachusetts	6.5	7.5	7.1	6.4	6.5
New Hampshire	5.0	7.6	4.0	4.0	4.9
Rhode Island	7.6	11.1	7.4	7.1	7.3
Vermont	5.4	6.9	5.4	5.5	6.4

ment rate in the region was 5.9 percent, compared to a U.S. rate of 8.0 percent. Rates in Connecticut and New Hampshire were below 5 percent; Connecticut has not seen unemployment rates so low since the 1960's.

In view of New England's low unemployment rates, it is not surprising that wages in the region are rising relative to those elsewhere. In 1983, average hourly earnings of manufacturing production workers rose 6 percent in New England and 4 percent in the country as a whole. Even so, hourly earnings in the region are only 91 percent of the national average.

To summarize, the pace of recovery in New England has been similar to that in the country as a whole. However, the composition of the recovery has been different, with manufacturing employment growing more slowly in the region. The recovery in New England manufacturing should accelerate in 1984 as business investment spending and export sales pick up, and as the effect of rising defense spending becomes more pervasive. Given that unemployment rates in New England are already close to pre-recession levels, stronger growth will result in tight labor markets and higher relative earnings in much of the region.

"The Industrial Heartland"

Norman Robertson
Mellon Bank

A solid upturn in the Heartland has been under way since November, 1982. Both the auto industry and, surprisingly, capital spending have been major contributors to the region's progress. Growth has been strongest in Michigan, where unemployment has dropped from 17.1 percent to 11.5 percent; unemployment is presently lowest in Pennsylvania at 8.3 percent.

The fact remains, however, that the most recent statistics place employment in the region nearly 1 million below the peak level reached in 1979. Other regions have generally regained most of the jobs lost in the recession and, in several cases, have expanded significantly beyond their former peak employment levels. The winds of fundamental structural change have clearly buffeted the Industrial Heartland more than other regions. But, it should be stressed as well that the relatively poor performance of the region reflects more than its smokestack-oriented industrial mix. The area has generally lost employment in recent years within those key manufacturing industries that form its industrial base. The reason: The region's plants are often the oldest and least efficient in the industry, with above-average production costs making them most vulnerable to cyclical episodes and foreign competition.

Table 3: Recovery in the Industrial Heartland as Measured by the Unemployment Rate

	Rate in January 1983 (percent)	*Reduction by January 1984 (percentage points)*
Michigan	11.5	5.6
Pennsylvania	8.3	5.2
Ohio	9.3	4.9
Illinois	9.9	3.6
Indiana	10.7	3.1
Wisconsin	9.9	2.1

Norman Robertson

With the Heartland's economy still far below pre-recession levels of activity, it is apparent that a sustained and broadly based national expansion lasting several years is the key ingredient needed for a return to economic health in the region. However, prospects for achieving this happy result are clouded by the major problems still facing the economy and policymakers—outsized federal budget deficits, high interest rates, and the overvalued United States dollar.

Chart 1:
Employment—Industrial Heartland and United States

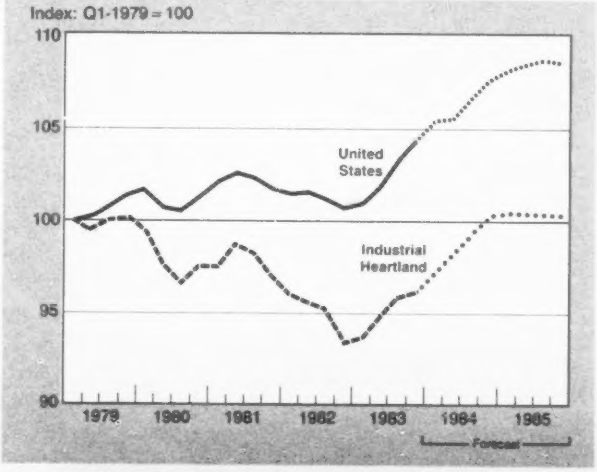

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Table 4: Key Indicators for the Industrial Heartland

	1980	1981	1982	1983	Forecast 1984	1985
Employment (millions)	23.1	23.1	22.4	22.4	23.1	23.7
Unemployment (percent)	8.9	9.4	12.4	11.9	9.3	7.8
Retail Sales (percent change)	2.6	6.3	1.5	5.7	9.2	8.8
Housing Starts (thousand)	166.8	123.9	105.3	166.5	210.0	203.0

These problems could potentially affect the Industrial Heartland disproportionately. Econometric estimates suggest, for example, that the rise in the dollar's international value cost the region some 500,000 to 600,000 jobs during the recession—about half of the total decline. High interest rates have also had a relatively severe impact on interest-sensitive spending in the Heartland: Construction contract awards for nonresidential building in the region were 48 percent lower in 1983 than in 1978, compared to drops of 3 percent in the Census Bureau's South Atlantic region and 7 percent in New England. Similarly, in 1983 residential construction permits were off 57 percent in the Heartland from the 1978 level, while the Census Bureau's West South Central and South Atantic regions registered *gains* of 57 percent and 21 percent, respectively.

Turning to the outlook, the national expansion is expected to be moderately strong during the balance of 1984, despite concern over deteriorating international competitiveness and large federal budget deficits. In fact, our latest projections place this year's growth of real GNP in the 5.5 percent range, somewhat above the consensus of private forecasters. The strengthening in industrial markets implied by a rapid and broadening economic upturn is expected to boost employment in the Industrial Heartland by 4 percent between the fourth quarters of 1983 and 1984. This would bring the total number of jobs to 23.6 million by the end of 1984, close to the previous peak level of employment and representing a gain of more than 7 percent since the recovery first took hold. The forecast also shows the unemployment rate dropping to the 7.5-8.0 percent range late this year. For the moment, we expect the national expansion to slow in 1985, limiting the prospects for continued expansion of employment in the cyclically sensitive Heartland.

The recovery in Pennsylvania has outpaced that in the region as a whole. As is usually the case, the state's upturn lagged behind the national recovery: Its cyclical low occurred in March, 1983, about four months after the United States economy reached bottom. But the recovery in Pennsylvania began to gather momentum last Spring and quickly picked up speed. From March, 1983 through January, 1984, Pennsylvania employment grow 7.7 percent, which compared favorably with the 4.3 percent figure recorded for the United States and, in fact, places Pennsylvania second among the ten major states in terms of employment growth since the recession low.

A number of other statistics also reflect significant improvement in the Pennsylvania economy. By year end, industrial electric power sales were 12.3 percent above the first quarter level. Help-wanted advertising has increased 28.2 percent; the average workweek at Pennsylvania manufacturing plants has lengthened from 38 hours to more than 40 hours; and the rate of raw steel production jumped to nearly 15 million tons from a low of only 8.1 million tons per year. Meanwhile, retail sales of general merchandise, apparel and furniture stores have run about 13 percent above the prior year's levels.

In Pennsylvania's case, the strong upturn clearly owes a considerable debt to the early and vigorous rebound in capital spending in 1983. True, the turnaround was initially concentrated in high-technology equipment and transportation machinery. But for the last three quarters, basic capital goods manufacturing—which traditionally has been the driving force for Pennsylvania's manufacturing base—has gained considerable momentum. Pennsylvania is experiencing its most buoyant upturn since the 1950's. Moreover, given the rebound in corporate cash flow brought about by the economic expansion and, in part, by the accelerated cost-recovery system enacted in 1981, the outlook for further capital spending growth is bright. Thus, Pennsylvania's basic manufacturing sector can look forward to continued gains in 1984.

Table 5: Recovery in Constant-dollar Business Equipment Spending in the Industrial Heartland

Equipment Type	Date of Cyclical Low	Annual Rate of Growth in Recovery (percent)
Transportation	Q III-1982	19.8
Heavy Industrial	Q IV-1982	18.3
High Tech	Q IV-1982	16.5
Construction	Q I-1983	47.1
Energy	Q I-1983	20.1

The Mid-Atlantic

Thomas J. Spitznas

Chemical Bank

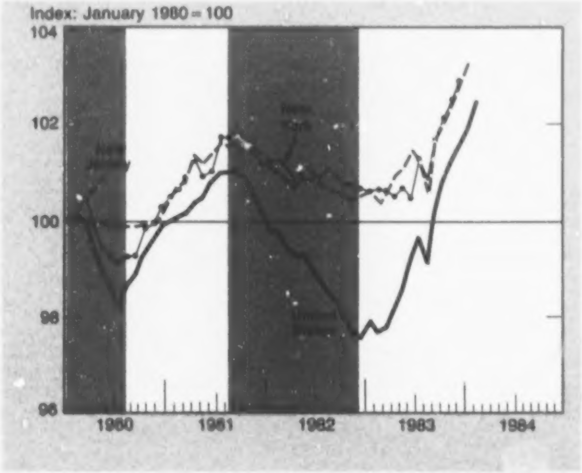
After a somewhat sluggish start, the economic recovery in the Mid-Atlantic region began to pick up steam last Summer and is now back on track. This is fairly typical behavior for New York and New Jersey, where the relative absence of cyclically sensitive industries make V-shaped recoveries a rarity. Despite the late start, by year-end 1983 private payroll employment in both New York and New Jersey had surpassed the level of January, 1980, the business cycle peak preceding the back-to-back recessions of the early 1980's (Chart 2).

The recent behavior of the region's unemployment rate tells a similar story. Over the first year of recovery, the national unemployment rate declined a surprising 2.3 percentage points, while the rate in the Mid-Atlantic region fell only 1½ points. However, at 7.3 percent in January, 1984, the Mid-Atlantic rate is still well below the national rate.

Inflation has been running above the national rate in the Mid-Atlantic region. Consumer prices last year increased 4.4 percent in the New York-Northeastern New Jersey area, compared with 3.8 percent nationally. During the early stages of a business recovery, it is not unusual for prices to rise faster in the New York City area than nationally. Beyond the first year of expansion, the New York inflation rate tends to come into line with the national rate.

Other regional indicators are more or less tracking the national pace. Mid-Atlantic retail sales, for example, increased around 10 percent during the first year of recovery, which is a shade below the national gain. Over the first three quarters of 1983, personal income in New Jersey grew somewhat faster than the national average, while income in New York grew somewhat more slowly.

Chart 2:
Private Payroll Employment—New Jersey, New York, United States



Note: New York data incorporate 1983 benchmark revisions; New Jersey data do n

Thomas J. Spitznas

The recovery last year was quite uneven within the region. The downstate portion of New York State (New York City and its suburbs) outperformed the upstate area, while the downstate suburbs—led by Long Island—grew faster than New York City. In New Jersey, the contrast is just as striking between rapidly growing areas such as Paterson-Clifton-Passaic and Atlantic City (where casino employment jumped 9½ percent last year), and slower-growing areas such as Hackensack and New Brunswick.

Two developments at the national level last year were especially favorable for the Mid-Atlantic economy. The first was the change from a consumer- and housing-led recovery to an expansion in which capital spending plays a relatively more important role. Beginning in the second quarter last year, real spending on capital equipment increased at nearly a 15 percent annual rate. During 1984, business spending on capital goods is likely to be the fastest-growing major economic sector. Another recent development that tends to support an optimistic outlook for capital spending has been the welcome slowing of the national economic expansion to a more sustainable rate. Had the rapid growth of last year's second and third quarters carried over to the fourth quarter, the chance would be much higher that interest rates would rise to a level that chokes off the revival in capital spending—and perhaps the expansion itself. The prospect of huge federal budget deficits gives the financial markets enough to worry about without the added concern of an overheating economy.

These developments are important for both New York and New Jersey because of the relative importance of capital equipment manufacturing in the region. This is especially true for upstate New York, where business equipment and industrial instrument manufacturing make up a relatively large portion of the economic base. The region also has a relatively large share of high-tech firms that will benefit from the strength in demand for capital equipment. New York, for example, has 8 percent of the nation's total nonagricultural jobs, but 11 percent of the nationwide employment in high-tech industries. Undoubtedly, the sharp pickup in the region's employment growth during the final quarter of 1983 was in good part a response to the strength of business equipment demand earlier in the year.

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Given the strong likelihood of a solid, if unspectacular, growth of the national economy in 1984, the Mid-Atlantic economy should easily top last year's performance. With real GNP expected to increase around 5½ percent, a 4 percent gain in U.S. private payroll employment is not unreasonable for 1984. This is a somewhat lower employment forecast than 5½ percent real growth would have implied during the business cycle expansions of the 1970's. However, as businesses continue to substitute capital for labor and as more corporations adopt "lean and mean" personnel policies, employment growth is likely to be held down during 1984. These same forces will dampen private employment growth in the Mid-Atlantic region, especially in New York City and suburbs like Westchester County, where corporate headquarters make up a relatively large share of the employment base. Employment in the Mid-Atlantic region should grow about one percentage point slower than the national rate—a performance roughly comparable with that during the expansions of the 1950's and 1960's and superior to the regions's relative performance during the 1970's (Chart 3).

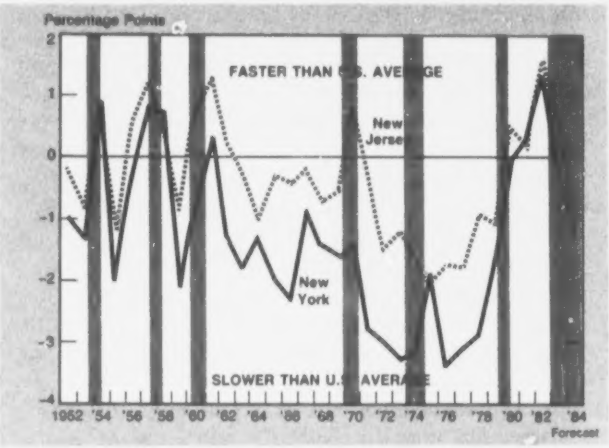
The major threat to continued national expansion in 1984 is a swelling of the projected federal deficit beyond the already-high $180 billion anticipated for the fiscal year beginning October 1, 1984. If the financial community concludes that this is happening, interest rates could rise to the point where economic growth becomes difficult, if not impossible. This would, after a time, have an adverse effect on the region. The probability of a $180 billion deficit "crowding out" a significant number of private borrowers in 1984 is not very high. However, beyond 1984, the risks of crowding out and escalating interest rates become a more likely threat to continued prosperity both nationally and in the Mid-Atlantic region.

Table 6: Percent Change in Private Payroll Employment

	1983[a]	*1984 Forecast*
United States	0.6	4.1
Mid-Atlantic	0.7	3.0
New York	0.5	2.8
New Jersey	1.2	3.3

[a] It is assumed that preliminary 1983 estimates for New Jersey will be revised up by 0.8 percent.

Chart 3:
Growth Rate of Private Payroll Employment—Deviation of New York and New Jersey from United States Average



The major long-run problem for the region is the continued erosion of manufacturing, especially in New York City where this problem is contributing to a disturbing trend toward a society of "haves" and "have nots." Other problems that could become counterproductive for the region include a serious housing shortage in New York City and certain of its suburbs; a looming battle between upstate and downstate New York over cheap hydro power; and some name-calling between New York City and New Jersey over a commercial development project in New Jersey that New York views as a threat to its job base. As serious as some of these problems are, they appear to be more than offset by a renewed commitment on the part of the private sector to invest in the region and to work with the public sector to improve its general economic and fiscal well-being.

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The Upper Southeast

Kemper W. Baker, Jr.*
Federal Reserve Bank of Richmond

For the Upper Southeast, 1983 was a year that began with subtle but undeniable stirrings of economic recovery. Early indications of a turnaround were found in the textile industry and in residential construction, while the arrest of precipitous declines in the furniture and building materials sectors offered further evidence. Expectations were taking account of these developments, but there was little suspicion that 1983 would bring the broad, robust recovery that was then gathering momentum.

As the year unfolded, the unemployment rate in the region, after spurting to nearly 10.8 percent in January, faded quickly, reaching 7.9 percent by November. Business activity in the region was able to ride the crest of the wave of home building and consumer spending that drove the recovery throughout its first year. The manufacture of building materials, non-apparel textiles, furniture and fixtures, and appliances all made major contributions to recovery in the Upper Southeast, as did the region's own residential construction sector. By year end, shipments, employment, capacity utilization, and profits in those sectors, concentrated in Virginia and the Carolinas, were much improved, and the outlook was continuing to firm. Results were less striking in other areas, although Maryland was able to make significant employment gains on the strength of trade and services. Delaware's gains were concentrated primarily in the construction and services sectors. The District of Columbia made little progress, as gains on the government side barely offset losses in trade and services. Although losing manufacturing employment as well as some of its share of U.S. coal output, West Virginia added jobs throughout the year; nonetheless, November, 1983, levels were still below those of November, 1982.

Prospects for the current year appear positive, on balance. Of course, the staying power of the U.S. recovery is a principal question in nearly everyone's mind. But if the recovery continues to follow a nearly normal path, the outlook for the Upper Southeast is certainly positive and, perhaps, spectacular. That distinction will hinge, in part, on developments in the foreign trade sector. To a large extent, the region's 1983 progress was made in spite of the marked deterioration in the trade accounts. For instance, U.S. imports of textile products exceeded exports by $10.6 billion, up a third from the previous year. Similar, though less dramatic, effects were felt in the primary metals, furniture and coal industries, each of which is a major producer and employer in the region. A cyclical improvement in exports would provide a significant stimulus to those sectors and the region in 1984 and beyond.

Kemper W. Baker, Jr.

Three other factors provide the principal bases for a positive regional outlook. While these factors are not exclusively regional, they are important in the Upper Southeast. First is the revival of the capital and industrial goods sectors, a revival that has been developing for several months now. As this recovery gathers momentum, it will generate activity in the machinery, electrical equipment, construction materials, metals and chemicals industries that provide significant income and employment in Delaware, Kentucky, Maryland and West Virginia.

Second is the prevalence of modernization and efficiency-enhancing measures taken by some manufacturing concerns in recent years. This second factor will underpin the recovery in several industries by reducing break-even sales levels; but also, and probably more importantly, it will reduce unit costs and make some firms more competitive with foreign producers. The textile industry is one example of this. Improved production techniques, as well as better inventory control and handling procedures, will enable some firms to raise and stabilize their production and sales. Other industries in which similar improvements have been made include apparel, major home appliances, and paper. Of course, the recovery's first-round effects on employment may well be mitigated by these developments, but positive results are likely to accrue in the longer term.

Last among the three factors is the progressive restructuring of the economic base of the region. The substantial concentrations of industrial activity that have characterized several states of the region are breaking down. The greater diversity of the economic base has already raised and stabilized income and employment levels in the region, but the full effects have yet to be felt. In a sense, the economies themselves are being modernized just as several of their constituent older industries have been. Significant contributions to this phenomenon have come from the influx of producers in such industries as machinery and electrical and electronic equipment, as well as the rapid growth of the so-called information industries, including research and consulting.

We may expect then that the mature recovery hoped for in 1984 and beyond will further boost economic activity in the region, just as its callow phase did in 1983. It seems likely, also, that the gains associated with the maturing recovery will build on those already achieved. The region's textile, building materials, and appliance groups should track national construction and consumer durables activity as it holds or furthers the advances of 1983.

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*The views expressed are, unless otherwise indicated, those of the author; none is intended, nor should be construed, as representing the view of the Federal Reserve Bank of Richmond or of the Federal Reserve System.

Despite the widely held and very reasonable expectation of further declines in U.S. net exports in 1984, there is hope for improvement in world demand for the products of the Upper Southeast. This hope hangs on a prospective rise in world trade activity. It seems at least likely that the world's industrial economies will grow in coming months. Such growth would offer the prospect of world trade finally rising after several years of stagnation, and would provide some stimulus to the large transportation sector, rails and ports, that funnels goods into and out of the United States through the Upper Southeast.

Unfortunately, however, there is no economic counterpart to the ideal weather forecast of fair, sunny skies, balmy temperatures, and no chance of precipitation. There is always a thunderstorm or worse somewhere in our economic radar area. But in the Upper Southeast, the structure of the economic base, as well as the recent revamping of portions of its industry, should make 1984 a year of solid gains in employment and income, all within the context of continued national growth and the gathering strength of recovery in the other industrialized nations. The risk to the region of national or international stagnation or decline must, of course, be recognized, but that risk appears minimal for 1984.

The Lower Southeast

John M. Godfrey
Barnett Banks of Florida, Inc.

John M. Godfrey

The "Sun Belt" states will continue to dominate economic growth relative to the "Frost Belt" states. The importance of energy development, relatively low wages, energy costs, tax rates and above-average population growth will provide strong incentives for economic expansion in the "Sun Belt" states. In addition, environmental conditions and lower levels of urbanization will insure that "Sun Belt" states are relatively more attractive in sustaining development. Also, many of the manufacturing firms located in the South are in rapidly growing industries and expansion by these firms is likely to take place close to their present facilities. While the strongest growth will continue to be in the South, this growth will be at lower rates than in the past.

The South, however, is a diverse region. Just as the prolonged national recession exposed the five states comprising the Lower Southeast to different degrees of recession, the rising tide of recovery has not restored them evenly. Florida and Georgia merely slowed during the national downturn and have experienced brisk expansions during the national recovery. These states are moving forward at record rates. Alabama, Mississippi and Tennessee, in contrast, suffered more during the 1980 and 1981-1982 recessions and generally have not fully recovered. These different recovery patterns suggest that not all "Sun Belt" states are equally well positioned to expand in the future. The differences reflect basic variations in economic structure that affect the states' cyclical and long-term growth prospects.

The lower concentration and better industry mix of growing manufacturing firms explains much of the better cyclical performance of Florida and Georgia. Alabama, Mississippi and Tennessee all have higher concentrations of manufacturing employment than the nation at large, and much of their manufacturing is in slower-growing industries. Some industries are declining, while the substitution of capital for labor dims employment prospects in some sectors even as output rises.

Higher secular growth in Florida and Georgia is a result of substantially above-average population growth, and supports greater service-sector employment. Alabama, Mississippi and Tennessee have population growth only slightly above the national pace. Economic performance in the region will be better than the national average during the next two years, but the prospects are badly skewed in that they are heavily dominated by the combined strength of Georgia and Florida.

Florida has been growing vigorously for nearly two years and helped set the stage for the national recovery. Fueled by strong gains in residential and commercial construction and related activities, tourism, and services and trade, the Sunshine State posted one of the largest and most rapid employment gains of any state in the nation. The opening of Disney's Epcot in late 1982 helped fuel strong gains in tourism, and investment in lodging remains strong. Activity has failed to revive only in the areas of phosphate mining in central Florida and international activities in south Florida, largely reflecting the strong U.S. dollar and weak Latin American economies. Unemployment has fallen to 7 percent and remains roughly one percentage point below the national average. Prospects appear bright for continued rapid growth in 1984 and 1985. Immigration is expected to boost population by 2½ to 3 percent, or 250,000 to 300,000 per year. This will lead to further strength in housing and additional commercial and retail construction. Although manufacturing is relatively small, growth is rapid in the state's high-tech industries; much of this is defense related. Also, there were sizable rebounds last year in the lumber, building materials, and manufactured housing industries. A large portion of growth in services jobs is in health care, related to the state's large retiree population. Tourism, especially in central Florida, will continue to benefit from improving economic conditions in surrounding states and the eastern United States. However, the harsh winter cut citrus output for the third time in four years.

Georgia has experienced above-average growth during the upturn. Atlanta's large, diversified and relatively noncyclical base helped support the state. Job growth was nearly 3 percent last year and, with an abatement of widespread layoffs, was sufficient to produce a 6.6 percent unemployment rate at year end. The housing recovery in the state and throughout the country has lifted direct construction jobs, as well as employment in lumber and other building materials manufacturing and such home furnishings as carpets. The strongest job growth occurred outside of Georgia's capital city. Growth in construction-related manufacturing jobs will slow in 1984. Rising consumer spending on clothing should increase the employment in textiles and apparel, however, and Atlanta's position as a regional crossroads will continue to provide steady growth to the state.

Alabama, Mississippi and Tennessee are recording below-average growth that has left them short of their previous highwater marks. Employment will not return to peak levels until the end of 1984, and even then Mississippi will not be fully recovered.

The recovery in *Alabama* continues to lag the stronger national expansion. However, recent employment data indicate that the state's economy definitely has turned around as demand has risen for Alabama's durable manufactures. While the unemployment rate ended the year at 12.3 percent, it was well below the year-earlier 15.5 percent. The outlook is for a modest upturn during 1984 and slow growth in 1985. The expansion in Alabama's manufacturing employment is limited because of the concentration of slow-growth industries. Coming off a low base, employment growth is expected to reach 3.0 percent by the end of 1984, and then slow to 1.5 percent by the end of 1985. The state's unemployment rate will move down slightly as manufacturing benefits from continued strong automobile demand. However, the rate will remain relatively high as coal and oil continue to be weak spots.

Recent employment gains indicate that a recovery is in place in *Mississippi*. As in Alabama, the expansion in Mississippi is lagging behind the U.S. recovery. However, improvement has been made as the state's unemployment rate fell to 10.0 percent in December, down from 11.8 percent a year earlier. Job growth approached a 1 percent annual rate by year end. During 1984, the economic recovery in Mississippi will be slower than the national average: Personal income growth should reach 8.4 percent, compared to 9.0 percent for the nation. However, economic growth in 1985 should parallel the nation's, as personal income growth rises to 9.1 percent in Mississippi and 9.2 percent in the United States.

Tennessee's economic recovery began earlier than Alabama's and Mississippi's but the recovery is still weaker than the national average. The 1982 World's Fair provided a boost but that lapsed in 1983, when the state was also affected by the reorganization of a number of financial institutions. The state's unemployment rate moved down from 12.7 percent in December, 1982, to 10.3 percent a year later. Payroll employment began expanding in early 1983, and job growth was at about a 2-percent rate toward the end of the year. In manufacturing, nondurables predominate and have better prospects over the near term. The outlook is for nearly average economic growth in Tennessee during the next two years. Employment growth in the 2 to 3 percent range will help generate income growth to 8 to 9 percent. Even though Tennessee has posted a relatively strong rebound, the gains could weaken as the recovery matures.

"America's Breadbasket"

Marvin Duncan*

Federal Reserve Bank of Kansas City

Marvin Duncan

The outlook for U.S. agriculture is fairly bright. The farm recovery that began last year is expected to become stronger and more broadly based in 1984. Sharp reductions in output of major crops, resulting from acreage cutbacks and drought, combined with historically large government payments to farmers, turned farm income around in 1983. However, livestock producers and agribusinesses did not share in the recovery. For 1984, income growth will be more uniformly distributed across U.S. agriculture. But even as prospects for this year have brightened, some clouds of uncertainty are appearing on the horizon for the years beyond 1984.

Adding substance to the improved prospects for farm income, prices received by farmers began rising last Fall. In January, they were 12 percent higher than a year earlier. This compared with an increase of less than 4 percent in the index of prices paid by farmers. The most dramatic increases have been in crop prices. The index of crop prices was up one-fifth in January over a year earlier. Prices were up 52 percent for vegetables, 36 percent for oil-bearing crops, and 30 percent for feed grains. These changes account for most of the increase in the crop price index. Although prices of major field crops may soften soon, vegetable and fruit prices could increase further. The rise in the prices of livestock products has been slower—a gain of less than 6 percent since early 1983, with most of that coming in early 1984. Unlike crop prices, however, livestock prices will probably increase through much of 1984.

The changes in farm commodity prices reflect the current supply-demand relationships for major crops. A combination of acreage reductions brought on by the federal Payment-in-Kind (PIK) program and drought-reduced yields sharply lowered 1983 production levels for feed grains, soybeans and cotton. Wheat production was not greatly affected by either PIK or the drought.

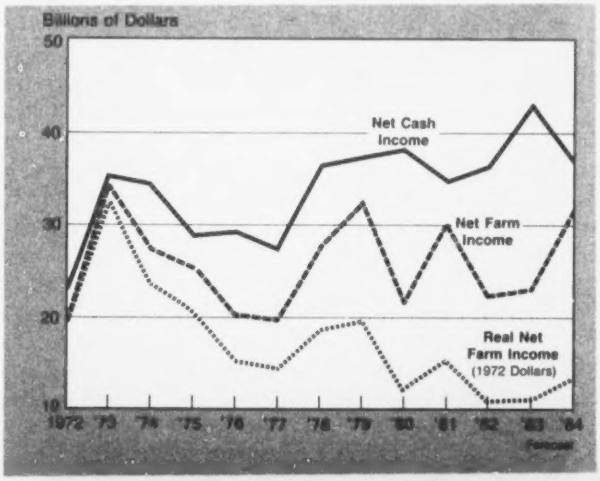
Stocks of both feed grains and soybeans have been sharply reduced. Both will be at near-minimum carryover levels by the end of the 1983-1984 marketing year, leaving the price outlook for both crops sensitive to planted acreage and growing conditions in 1984. Production problems could send prices soaring. Alternatively, very large production would cause prices to drop substantially. Cotton producers will probably see a similar, though less dramatic, swing in supply. Wheat producers face a rather bleak outlook, with a larger prospective crop adding to already burdensome stocks.

On balance, a return to large planted acres for major crops in 1984 is almost a certainty. With a far less generous government acreage-reduction program meaning less participation by farmers, harvested acreage of major crops could approach the high levels of 1982. Thus, with normal production weather, the stage is set for a substantial buildup in supplies of all major crops and additional downward pressure on prices by the end of Summer.

The outlook for livestock is much brighter than for crops. Cattle numbers at the beginning of the year were about 1 percent less than a year earlier, and further declines are expected over the next year or two. Hog producers are also planning production cutbacks. The inventory of breeding hogs has been reduced 1 percent, and additional reductions are likely. Only about half as many dairy cows as earlier expected will be slaughtered under the government's program to reduce milk production. All this means that meat production this year is expected to be about 2 percent less than the record production last year.

Continued expansion of the U.S. economy will add to personal income and total employment this year, pointing to an increase in demand for meat. That, with the reduced breeding herds of cattle and hogs, points to higher livestock prices and profitable livestock production for the next two to three years.

Chart 4:
Farm Income



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Growth in the export market—a market of major importance to farmers—will be disappointing again this year. Although the value of agricultural exports may climb to nearly $38 billion in fiscal 1984, tonnage may be down for the fourth year in a row. Growth in farm exports has been limited by weakness in the economies of our trading partners and increased competition in world markets. The dollar's value—up over 50 percent on a trade-weighted basis since 1979—is proving a major problem for exporters.

Nonetheless, farm income is expected to improve in 1984 because of higher average prices for crops, large crop production, higher livestock prices, and last year's PIK grain marketed in 1984. Higher cash receipts, especially from crops, will more than offset somewhat lower government payments and higher farm production costs. Net farm income is expected to increase from $23 billion in 1983 to a range of $29 to $34 billion in 1984. Inventory adjustment will add substantially to net farm income. Coupled with higher cash production expenses, that means net cash income may fall $5 to $7 billion from the record $43 billion earned in 1983 to a range of $36 to $39 billion.

The new year began with farm credit conditions mixed. In the Tenth Federal Reserve District, for example, loan demand was the highest in more than two years and available funds were plentiful at agricultural banks. Nearly half the agricultural banks in the district were looking for new farm loan accounts, but the emphasis was on loan quality. The rate of loan repayments had declined, and requests for renewals or extensions had increased. Interest rates on farm loans, stable throughout 1983, were at 14 percent for operating loans as the new year began.

As a result of higher farm income, financial conditions of U.S. farms may improve somewhat in 1984. Farm land values appear to have stabilized and could strenghten somewhat after three years of decline. Assets other than real estate may increase in value, and the farm sector's debt-asset ratio could improve somewhat. But while most farmers will probably solidify their financial conditions, a small and visible proportion of farmers will have more financial problems. As a result, exits from farming because of financial stress will probably continue higher than normal in 1984.

Agribusiness firms can look for a better year in 1984. Three years of recession, followed by a year of PIK that brought unexpected sharp cutbacks in agribusiness sales have strained many firms. Tenth District bankers reported that 13 percent of rural nonfarm businesses in their trade areas were having severe financial problems when 1983 ended. Stronger sales at more profitable prices will bring welcome relief this year.

Despite higher farm and agribusiness income this year, the outlook for agriculture beyond 1984 is restrained. Excess crop production capacity and expected weak growth in export demand will likely limit growth in net farm income for a number of years beyond 1984. Such an environment could lead to further declines in real farm-asset values and continued financial problems for farmers and rural nonfarm businesses.

The Southwest

William C. Gruben*
Federal Reserve Bank of Dallas

The Southwest was slow in moving into the recession that began in mid-1981 and has been slow in recovering from it. While the national unemployment rate peaked in December, 1982, Texas' did not reach its high until March, 1983, while Oklahoma and Louisiana topped out in May, 1983. Arkansas' (seasonally adjusted) unemployment rate was never higher at any time during the 1980's than it was in October, 1983.

William C. Gruben

The Southwest entered its recession late, in part, because downturns in oil and gas drilling, oilfield equipment manufacture, and a number of other energy-related activities lagged the overall United States economic decline. During 1983, falling drilling costs and stabilizing oil prices helped to stimulate a drilling recovery, while declining interest rates brought on rapid increases in home construction in all of the southwestern states.

In Texas, the nation's number-two state in terms of prime defense contract awards, the doubling of prime defense contracts outstanding between the end of fiscal 1980 and the end of fiscal 1983 both dampened the state's recession and contributed to recovery. However, the repercussions of the Mexican peso devaluation of August, 1982, and the continuation of economic problems in Mexico in 1983 contributed to the maintenance of significant economic weakness along Texas' long border with Mexico and in Houston, where Mexicans have traditionally purchased oilfield equipment and retail goods. The United States recovery in the fourth quarter of 1982 significantly aided southwestern economic improvement. The Texas Industrial Production Index turned around in December, 1982, in large part because of significant increases in nondurable goods production in the state. During the latter part of 1983, when the growth of nondurable goods output began to slow, a revival in durable goods manufacturing began to contribute to a healthy economic revival. Last year also saw high rates in nonresidential construction in Texas and a boom in housing, paced by very high year-over-year rates of growth in multifamily construction.

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*The views expressed are those of the author and do not necessarily represent those of the Federal Reserve Bank of Dallas or of the Federal Reserve System.

In 1984, *Texas* will see continued declines in its unemployment rate. Drilling activity will continue to recover slowly, but fairly steadily. Demand for a number of types of drilling equipment should revive later in the year. At the same time, however, continued problems in Mexico will make recovery slow on the Mexican border, while the maintenance of rising defense expenditures and civilian demand for high-technology products contribute to economic robustness in the state's central corridor. The high levels of apartment construction that occurred last year and are continuing this year are contributing to significant multifamily overbuilding that will lead to pronounced declines in such construction this year, however. Single-family home construction should continue to increase somewhat in Texas, dampening the effects of the overall decline in home construction that is highly likely this year.

In *Louisiana*, some improvement in oil and gas drilling, a significant pickup in durable goods manufacturing, and growth in contract construction activity are likely to lead to moderate recovery in 1984. However, Louisiana's unemployment rate is considerably higher than that of the nation. This suggests that the state has farther to go than any of the other southwestern states before it can be scratched off the economic sick list.

The importance of natural gas to *Oklahoma* suggests that energy activity there will also prove somewhat slow in picking up, and will contribute to a modest recovery in that state. Natural gas deregulation in 1985 should lead to some anticipatory improvement in natural gas drilling in late 1984, however, and oil drilling should see some improvement for the rest of the year. Also, 1984 should see continued growth in the state's manufacturing sector, which clearly began to recover in 1983. In spite of the slow revival implied by lagging improvement in the state's labor statistics, there is clear evidence that the Oklahoma economy turned up during 1983. The state's unemployment rate is already below that of the nation, and should continue to fall.

The Mountains

Tucker Hart Adams

United Banks of Colorado

The 1982-1983 recession was the worst downturn the Mountain region has experienced in almost 30 years. Nonfarm employment fell 0.2 percent in 1982, its first decline since 1954, then grew only 1.5 percent in 1983—far below the 5.4 percent trend rate of the 1970's. Nonresidential construction, after falling in 1982, expanded by only 5 percent in 1983, reflecting the oversupply of office space in Denver and Phoenix. The recession in the Mountains continued into 1983, and the region's recovery lagged the national upturn by about six months.

Once the recovery arrived in May or June of 1983, however, it rapidly outpaced the national advance. Regional income growth of 7.3 percent through the third quarter of 1983 exceeded the national rate of 6.2 percent. This was the second largest regional gain in the nation, but it was not felt equally among the eight states in the Mountain region. While advances in Colorado and Arizona ranked third and seventh in the nation, respectively, Wyoming, which has been devastated by the oil price collapse, ranked 45th.

We expect the region's growth to continue through 1984 as income expands by 9.7 percent. Although this is far below the annual rate of 13.1 percent experienced during the 1970's, our inflation projection is also lower. In inflation-adjusted terms, personal income growth will be slightly below the 1970's trend.

Tucker Hart Adams

Employment will increase almost 4 percent in 1984, after its meager gain in 1983. Arizona and Colorado will post the strongest job gains in 1984, while Montana, hard hit by slumps in mining, lumber and agriculture, will show little improvement. Unemployment will drop a full three percentage points to 5.7 percent in 1984. The region made spectacular progress in 1983 as employment fell to 6.2 per-

Table 7: Mountain Region Economic Indicators

			Forecast	Percent Change		
	1982	1983	1984	1982	1983	1984
Personal income (billion $)	126.0	135.4e	148.6	7.0	7.5	9.7
Retail trade (billion $)	59.2	64.0e	69.7	5.7	8.0	9.0
Employment (thousands)	4,582.0	4,632.0e	4,813.0	-0.2	1.1	3.9
Unemployment (%)	8.7	8.6e	5.7	N.A.	N.A.	N.A.
Housing construction (thousand units)	100.8	162.5	157.6	0.6	61.1	-3.0
Nonresidential building (billion $)	4.4	4.6	4.7	-5.9	4.8	3.0
Population (thousands)	11,967	12,170e	12,475	2.6	1.7	2.5

e = estimate

cent in November, almost five percentage points below its peak of 10.8 percent in February. Colorado had the lowest unemployment rate in the region, 5.5 percent; New Mexico had the highest, 9.0 percent, reflecting the relatively slow progress this state has made in terms of recovery. New Mexico's unemployment rate did not begin to fall until July, 1983, while the rates of other states in the region peaked early in the year. Population growth in the Mountain region is closely associated with job opportunities; as employment picks up, this measure will follow suit.

Although construction provided the engine for growth in 1983, the industry will not maintain its momentum in 1984. Once mortgage rates dropped from their peak of 17 percent in 1981 and 1982, the strong population growth of the 1970's translated into a 61 percent gain in home building in 1983. During this period, apartment building proceeded at a rapid pace in both Arizona and Colorado. This is unlikely to continue into 1984. As a result, housing starts are likely to decline slightly, led by a 17 percent retrenchment in Arizona. Nonresidential construction surprised most analysts in 1983, posting a 4.8 percent gain despite office vacancies estimated to be in excess of 20 percent for both Phoenix and Denver. Significant gains in nonresidential building in New Mexico, Utah and Wyoming compensated for declines in Arizona and Idaho, while Colorado's sector remained static. The start of a new electrical power plant in Wyoming caused the rate of advance in the construction payroll there to be the highest in the nation. Hospital and dam building contributed to a 40 percent boost in New Mexico's nonresidential construction.

The recent recession accelerated the structural changes already taking place in the regional economy. While the mining industry still accounts for 6 percent of the region's income, and is three times more important in the region than nationally, the decline in oil prices has stifled growth in that sector. The recovery will cause energy consumption to pick up, but will not provide the impetus needed to resume the growth rates experienced in the 1970's. Mining is particularly important to Montana, Wyoming and New Mexico. The boom-bust nature of energy activity in those states will be a factor limiting future growth. The decline in mining payrolls in Montana was the second worst in the nation in mid-1983.

Manufacturing in the region is gaining in importance although it provides only 14 percent of regional income in contrast to 24 percent nationally. Defense and high-technology industries provide a large share of manufacturing employment in the Mountain region: 40 percent of Arizona's and 25 percent of Colorado's manufacturing is high technology, relative to 7.5 percent nationally; and 15 percent of Utah's manufacturing is defense-related. Traditionally smokestack industries are relatively absent. The lumber and wood products industry is dominant in Montana and Idaho, comprising 30 percent and 40 percent respectively, of the manufacturing base. The strong growth in housing starts in 1983 enabled many lumber firms to expand employment from recession-reduced levels. Since housing starts are expected to remain at current levels in 1984, the recovery in the lumber sector should level off.

Although the service industries grew little during the recession, they will show significant progress in 1984, in line with the projected 9.7 percent expansion in personal income. Nevada, which is closely tied to the fortunes of tourism and the gaming industry, was hurt in 1983 by the reduced levels of travel and tourism induced by the recession. A substantial improvement is expected in 1984, but the state will be hurt by continued competition from gaming in Atlantic City. This will be felt most keenly in the southern part of the state.

Military expenditures will offset declines in other government payrolls, the largest source of income in the region. Agriculture is not expected to post significant gains; 60 percent of the region's farm income is from livestock, and the escalation of feed costs prompted by the midwest drought and the payment-in-kind (PIK) program will continue to hinder the industry. Overall, the Mountain region will have a good year in 1984. Although a stagnant energy industry will put the region on a lower growth curve than it enjoyed in the 1970's, a growing service sector and an increasingly important manufacturing sector will ensure that the area remains the most rapidly growing in the United States.

The Pacific

Joseph A. Wahed
Wells Fargo Bank, N.A.

The Pacific region is breathing easier once again.[1] Business activity has improved in most of the states comprising the region and along a broad group of industries. There is a widespread feeling that the worst is over and that 1984 will also be one of expansion. Even in the hard-hit lumber areas of the northwest, confidence levels have risen although activity is still far off the pre-recession peak. In many other industries, output and employment have increased smartly, reflecting a remarkable rise in sales. As a result, profits are much improved and balance sheets are now stronger in a variety of corporations.

The current recovery started in mid-1982, but activity really took off in the Spring of 1983. Lower interest rates, sharp tax cuts, and the region's continued inflow of defense contracts triggered a chain reaction rebound in the region's economy—first housing and lumber, then consumer spending, then a whole gamut of financial and other service industries, including tourism. Unemployment fell sharply as total employment rose by over 500,000 between late 1982 and 1983. This led to a gain of nearly 7 percent in personal income—most of it "real" since prices hardly increased. Still, the Pacific region is not quite out of the woods. Some important industries are still facing financial strains and are recovering hesitantly. These include agribusiness, aircraft assembly, commercial (mainly office) construction, and export industries. In addition, bank deregulation and lower energy prices will continue to cause instability.

For 1984 and even beyond, most indications point toward additional growth in the Pacific region. The determining forces will continue to be centered around favorable job growth and rising real incomes in an environment of moderate inflation and relatively stable interest rates.

As we enter 1985, however, pressure on the economy will start to build and troubles will appear here and there. First, increased competition for labor will cause salaries and benefits to rise at a faster rate, despite continued sharp belt-tightening measures in most corporations. This will add to inflationary pressures. Second, the large budget deficit (and rising inflation rates) will force the Federal Reserve to maintain a high interest-rate policy, unless the economy slows to a crawl. The net results of these forces is that the Pacific region's economy will still grow but its interest-sensitive industries will zig and zag for a while.

Joseph A. Wahed

Approximately 600,000 new jobs will be added to the Pacific region's work force in 1984, on top of the 300,000 increase in 1983. Job growth is, of course, concentrated in California, which accounts for 75 percent of the region's total employment; however, Oregon, Washington, Alaska and Hawaii will also add to their work forces, reflecting the widening and deepening of the recovery. This strong increase in employment is all the more remarkable since it is taking place in an environment of fairly rigid belt-tightening by many corporations, particularly in deregulated industries such as banking, airlines and communications. Still, increased hiring in construction, manufacturing and retailing will lower the region's unemployment rate to 7.5 to 8 percent by late 1984. As in other parts of the country, the same phenomenon of a slow-growing labor force is helping to push down the unemployment rate at a faster rate than usual.

More confident consumers and rising incomes are bound to cause further growth in consumer markets. Last year, retail sales in the Pacific region rose by nearly 9 percent with durables advancing a strong 15 percent. In California alone, nearly one million new cars (half of them imported) were sold, and further growth is all but assured. Several favorable factors will stimulate consumer spending in 1984 in the Pacific region:

(1) Growth of 10 percent, or $43 billion, in personal income;
(2) A moderate inflation rate, below the national average;
(3) Pent-up demand following three years of recession;
(4) Improvement in tourism, especially in the well-known tourist spots of Hawaii and California; the Olympics in Los Angeles and the Democratic National Convention in San Francisco should also increase the flow of summer visitors to the West Coast;
(5) The sharp increase in housing activity in 1983 and further growth this year will push sales of appliances, home electronics (including computers), and other home-related goods and services.

The recovery is spreading rapidly in the region's important manufacturing industries. Employment has already risen sharply (over 100,000 in California alone) in such capital goods industries as machinery and electronics, and

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[1] The Pacific region includes California, Oregion, Washington, Alaska and Hawaii, and accounts for roughly 15 percent of the U.S. economy. Its population is 34 million, of whom 15.4 million are employed. Total personal income is estimated at $476 billion; per capita income is $14,000.

Table 8: Selected Economic Indicators for the Pacific Region

	1982	Estimate 1983	Forecast 1984	Percent change 1983	Percent change 1984
Population (millions)	33.1	33.5	34.0	1.3	1.4
Personal income (billion $)	405.4	433.1	476.0	6.8	10.0
Employment (millions)	14.5	14.8	15.4	1.6	4.0
Unemployment (%)	10.3	9.8	8.0	—	—
Retail sales (billion $)	169.8	184.4	205.0	8.6	11.0
Nondurables	119.0	126.0	136.0	5.9	8.0
Durables	50.8	58.4	69.0	15.0	18.0
Farm output (billion $)	18.6	18.7	19.6	0.5	5.0
Housing permits (thousand units)	121.5	200.0	230.0	65.0	15.0
Defense contract awards[1] (billion $)	33.4	39.0	43.0	17.0	10.0
Total bank loans (billion $)	137.9	140.8	155.0	2.1	10.0

[1] Fiscal year. Includes procurement *and* R&D.

Note: 1983 figures partly estimated; 1984 forecasts by Economics Department, Wells Fargo Bank.

in basic sectors such as chemicals, lumber and paper. Higher capacity usage is forcing many previously cautious manufacturers to expand and invest in new facilities. Stronger demand for cars has meant higher output and employment in the region's auto-assembly sector with further gains ahead as the Toyota-GM agreement takes effect later in 1984. In addition, with consumer demand so buoyant, other consumer-related manufacturing (furniture, restaurant supplies, entertainment goods, etc.) is also increasing. It is true that not all lumber mills in the Northwest are operating, but continued gains in home sales should help in the months ahead. Aircraft assembly in Washington and California is still hurting from the recession, although some moderate improvement is expected in the coming year. New orders for commercial aircraft are just now starting to improve as the world's airlines experience an increase in passenger and freight traffic and as profits recover.

In the Pacific region's important defense sector, the growth in procurement and R&D has been nothing short of phenomenal. We estimate that such spending in the region in FY 1983, will have reached $39 billion, for an increase of 17 percent; more moderate gains are expected in FY 1984. The Pacific region also receives substantial funds for numerous military bases, especially in Hawaii, California and Alaska. Spending on space programs is an added boost to such areas as Southern California and Seattle.

Housing activity will remain fairly brisk in the Pacific region, but last year's spurt of growth will not be repeated. Still, home builders are quite confident about sales this year and have gone ahead with their plans. Mortgage-lending institutions, especially savings and loans, are quite flush with deposits and are eager to make construction loans. At the same time, home-buyers appear finally to be adjusting to the idea of a variable mortgage rate and are back in the market. Home prices rose very little in 1983, and there are no indications of a renewal of an inflationary psychology yet. It is basically a buyer's market at present. All in all, new home permits will increase 15 percent this year to 230,000 units. Changing tastes and demographics in the Pacific region have meant more emphasis on condominiums, rentals, smaller single-family homes, and a move toward central-city living by empty nesters and senior citizens.

Commercial and industrial construction activity will be mixed this year. The recovery in manufacturing has improved the market for industrial buildings, and new industrial parks are being built in the rapidly growing areas of the Pacific region. Commercial construction is, however, still under pressure, much of it caused by an overbuilt office complex, especially in parts of Los Angeles, San Francisco, and other large cities. As a result, leasing activity has dropped sharply and with it square footage costs to the lessee. The strength in retailing has increased the need for distribution centers, as well as regional shopping malls, throughout the region.

The economic recovery has not yet benefited the agribusiness or mineral industries of the West. Farmers have had to struggle in the face of fairly low commodity prices and poor demand during much of 1983. However, prospects are a little better, reflecting not only drought in other parts of the country but also a fundamental strengthening in net farm income. Cotton prices have increased, while demand for fresh fruits and vegetables is rising due to steady increases in "natural" food consumption. Meat prices have risen somewhat, but the outlook is uncertain at present because dairy farmers are still slaughtering cattle.

Alaska's oil industry has been hurt by low prices and related cutbacks in drilling exploration. In California, another important producer of oil, activity has held up a little better and future plans call for wider exploration, especially in the southern California coastal area.

A better year for business is forecast for the various states in the Pacific region. Growth will likely slow in the months ahead but only temporarily. The real challenge will come in 1985, when stronger credit demands from the private sector will clash with the government's need to finance the deficit. Any rise in interest rates would quickly hurt the interest-sensitive sectors of the economy, housing in particular. So, while the year 1984 looks quite favorable for businesses and consumers in the Pacific region, the years beyond that are still fraught with uncertainty.

Research Bulletin

Restricted Stock For Executives

by Harland Fox

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SINCE THE BEGINNING of the decade, a relatively small, but increasing, number of companies in major types of business have used restricted stock awards as part of their management incentive program.[1] (See Table 1 for an industry distribution of companies that have such programs.) These restricted stock awards have two major characteristics: (1) The award is an *outright grant* of company shares; recipients do not have to buy the stock.[2] (2) The shares are forefeitable and nontransferable until the executive completes a specified period of continued employment with the company. In brief, the grant is a deferred bonus award, the payout of which is contingent upon continued employment.[3]

This arrangement for "earning out" an award by continued service can be used in a variety of ways, but two basically different approaches are found among the 91 plans studied here.[4] Fourteen of the plans provide *special awards to selected middle-management employees.*

These plans are designed to give special recognition to, and hold on to, fast-track, exceptional performers and persons with special skills and, in some cases, new hires. As a rule, managers who receive these awards are not eligible for stock options or an annual bonus award.

Most (77) of the plans, however, are essentially *incentive plans for top executives,*[5] who usually are eligible for stock options and annual bonus awards, as well.

Top Executive Incentive Plans

The most common purpose of restricted stock award plans is to provide a *supplemental* bonus to a limited group of top executives in recognition of exceptional company performance and exceptional personal performance for which the regular bonus award is not really adequate reward.[6] At the same time, it is an award that the executive must "earn-out"; most bonus plans do not require this. Five companies specifically state that restricted stock awards usually are limited to those years in which company performance is exceptionally good. In addition, almost 60 percent of the companies explain that recipients of restricted stock in any year are "essentially a select group of top performers" chosen from the executive corps. In the other companies, most of those eligible receive an award, but individual performance generally is reflected in the size of the award.

The usefulness of restricted stock in retaining personnel is underlined by the practice in some companies of giving restricted stock as a front-end bonus to newly hired executives. Another practice makes this award to a group of executives in a newly acquired business unit, or even to an executive who appears to find some other company more attractive.

By definition, restricted stock award plans are also a device for getting company stock into the hands of executives at no cost to them. Thus, they can be a supplement or substitute for stock options, which almost all of these companies have. In addition, in most plans, the executives can vote the stock and receive periodic dividends during the restriction period, a recurring reminder of the value of the grant. The Securities and Exchange Commission has held that the granting and vesting of restricted stock is not a "purchase" of shares for the purpose of Section 16(b), which applies to "insider" trading.

Because of the variety of uses to which restricted stock awards are put, it is not surprising that not all plans provide for grants year after year. For example, 20 of the companies have granted awards only intermittently on no fixed schedule; each year a decision is made about the appropriateness of awards. Other companies grant awards

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[1] *Top Executive Compensation 1983 Edition.* The Conference Board, Report No. 840, 1983, p. 2.

[2] Some companies do have restricted stock *purchase* plans, however. Under these plans, not included in this study, an executive purchases shares, usually at a discount, but cannot sell the shares for a specified period of years. If the executive terminates employment during this period, the stock must be sold back to the company at the initial purchase price. See F. Thomas Anderson, "Appraising Restricted Stock." *Compensation Review,* Second Quarter, 1980, p. 26.

[3] Not included in this study are three plans that add corporate performance requirements to the service requirements. For an examination of this type of plan, see George A. Goddu "TARSAP: A New Way to Award Executives Restricted Stock." *Financial Executive,* August, 1980, p. 39. These plans are essentially the same as performance share plans; see Harland Fox, *Executive Incentives: Long-term Performance Share Unit Plans.* The Conference Board, Research Bulletin No. 132, 1983.

[4] All of the companies in each industry shown in Table 1 that had a restricted stock plan in May, 1983 were asked for data, a total of 220 companies. The ninety-one that provided usable information include sixty-one manufacturers, ten retailers, eight banks, six construction companies, four stock insurance companies, and two gas and electric utilities.

[5] Only 9 of these 77 plans were adopted prior to 1975; twentythree were installed during 1975-1979, and the other 45 between 1980 and 1983.

[6] Not included in this study are two companies in which restricted stock is an integral part of the annual bonus plan; that is, it is the normal form in which bonuses are paid.

Table 1: Prevalence of Restricted Stock Award Plans, 1980 and 1983

		May, 1983		May, 1980
	Total	With Restricted Stock		Percent with
Type of Business	*Companies*	*Number*	*Percent*	*Restricted Stock*
Construction, publicly held	28	11	39%	30%
Manufacturing	510	137	27	18
Retail trade	92	23	25	19
Insurance, stock	71	16	23	9
Commercial banking	227	28	12	7
Gas and electric utilities	92	5	5	4

every two (seven), or three (one), or four (one), or five (three) years. In the remaining 45 companies (58 percent), the restricted stock awards are made every year, but not necessarily to the same executives.

Who Gets Awards?

By and large, restricted stock awards are made to a very limited number of top executives. For example, among the 77 plans studied here, the median number of people who actually received an award under the most recent grant is 19, with the middle half of the plans reporting 9 to 60 participants. The number of participants in all plans is summarized below:

Number of	*Plans*	
Participants	*Number*	*Percent*
1-9	21	27%
10-19	18	23
20-29	9	12
30-70	15	19
100-130	5	7
275-725	5	7
1000-4000	4	5
	77	100%

Obviously, the range in the number of participants is quite large; some plans gave an award to only one executive, but one gave awards to 4,000 managers. However, the nine plans that gave awards to 275 or more employees are plans in which a relatively large number of people are *formally eligible* for awards—but not all receive them. For example, the 4,000 awards given by one company represent 57 percent of the 7,000 exempt employees who are eligible. By and large, in the plans that granted awards to 130 or fewer executives, the number eligible is not much greater than the number who received awards. The increasing number of participants means that awards are being pushed down to a somewhat lower executive level.

This is illustrated in Table 2, which shows the salary of the lowest-paid executive who received an award under the most recent grant. The median salary of the lowest-paid participant in plans that granted stock to fewer than 20 executives is $75,000; in plans with 20 to 70 executives, the median is $60,000. Obviously, these plans cover only upper management. The plans giving awards to 100 or more employees reach into middle management: The median salary is $35,000 for the lowest-paid participant.

Size of Awards

As already noted, participants in restricted stock plans tend to be a highly selected group. However, any number of individual considerations may be reflected in the size of a restricted stock grant to a specific executive. Base salaries (which correlate with position in the management hierarchy), however, generally serve as a guide on which the relative size of individual restricted stock awards are determined.

To get a measure of the size of awards, companies were asked to indicate the value of the award, as a percentage of base salary, for the highest- and lowest-paid recipient and for the average-paid recipient of an award under their most recent grant. (The value of the grant is the product of the number of shares granted and the market value of the shares on the date of grant.)

The median award for the highest-paid recipients (practically all of whom are chief executive officers) is the equivalent of 70 percent of base pay, and one-third of the awards are equal to one year's salary or more. (See Table 3.) Awards for the average-paid and lowest-paid recipients are significantly smaller: The median award represents one-third of base pay for the average participant and about one-quarter of base pay for the lowest-paid recipient.

To some extent, the size of these awards is probably influenced by the fact that in almost 60 percent of the plans the awards are made every year. Awards made every two or three years might be larger, but the data are not adequate to measure this.

Table 2: Salary of Lowest-paid Restricted Stock Recipient

			Plans by Number of Recipients					
Salary of Lowest-paid Restricted Stock Recipient	*Total Plans*		*Less Than 20*		*20-70*		*100 and Over*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
$150,000-$240,000	5	7%	5	14%	—	—	—	—
100,000- 149,000	10	14	8	22	2	9%	—	—
75,000- 99,000	12	16	6	16	5	22	1	7%
50,000- 74,000	21	28	12	32	7	30	2	14
25,000- 49,000	26	35	6	16	9	39	11	79
Total[1]	74	100%	37	100%	23	100%	14	100%
Median Salary	$60,000		$75,000		$60,000		$35,000	
Middle 50% Range	40,000-90,000		50,000-108,000		40,000-80,000		29,000-47,000	

[1] Excludes three plans for which information not obtained.

Table 3: Size of Restricted Stock Awards

Size of Award[1] As Percent of Salary	*Highest-paid Recipients*		*Average-paid Recipients*		*Lowest-paid Recipients*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
200% and over	6	10%	3	4%	2	3%
150-199	7	13	3	4	2	3
100-149	6	10	7	10	6	10
90- 99	2	3	—	—	—	—
80- 89	6	10	2	3	1	2
70- 79	4	7	2	3	2	3
60- 69	3	5	3	4	2	3
50- 59	4	7	2	3	6	10
40- 49	5	9	7	10	4	6
30- 39	4	7	8	12	3	5
20- 29	4	7	12	18	12	19
10- 19	6	10	15	23	16	25
Less than 10%	1	2	4	6	7	11
Total	58	100%	68	100%	63	100%
Median Award	70%		33%		24%	
Middle 50% Range	37-144		18-68		11-58	
Median Salary	$250,000		$85,000		$60,000	
Middle 50% Range	190,000-425,000		57,000-129,000		40,000-90,000	

[1] Number of shares × market value at time of award.

The Restriction Period

The major features of restricted stock are: (1) that it may not be sold or transferred by the executive during the period that restrictions apply, and (2) that it is subject to forfeiture if the executive terminates employment under certain conditions during this restriction period. As a rule, the restriction period is a specific number of years following the date of award. At the end of that time, *all* restrictions are off; that is, the entire award is *fully vested*. Under these plans, an executive must stay with the company from one to ten years after the date of grant before *all* of the stock award is available.[1] (See Table 4.) The most common restriction period is five years; three years and ten years are also common.

In 31 percent (21) of these plans, none of the restricted shares are made available until the end of the restriction period, although this arrangement is limited to plans with

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[1] Not included in Table 4 are four companies in which awards become fully vested only at retirement; one company in which half of the award is vested five years after the date of grant, and the other half at retirement; and one company in which all awards are vested on January 1, 1986, regardless of the date of grant (the first awards were made in 1980).

Table 4: Restriction Periods[1]

Years in Restriction Period	Total Plans Number	Total Plans Percent	Partial Vesting[2] Yes	Partial Vesting[2] No
1	1	1%	—	1
2	1	1	1	—
3	10	16	5	5
4	7	10	3	4
5	29	43	19	10
6	4	6	4	—
6½	1	1	1	—
7	4	6	3	1
8	1	1	1	—
9	1	1	1	—
10	9	14	9	—
Total[3]	68	100%	47	21

[1] Period from date of grant until all restrictions are lifted.

[2] Restrictions on some part of award are lifted prior to end of restriction period.

[3] Excludes two plans for which data are not available, and seven for which restriction period [illegible]

a restriction period of five years or less. Most (69 percent) of the plans, however, provide for "partial vesting" during the restriction period; that is, some part of the award is made available periodically prior to the end of the restriction period.

There is considerable variety in these partial vesting schedules, as Table 5 illustrates. However, except for one plan in which part of the award is available at the date of grant, no shares are vested until after one to six years. In almost half (21) of the plans, the first blocks of shares are vested one year after the date of grant.

Forfeiture Provisions

As a general rule, the unvested portion of a restricted stock award is forfeited only if an executive quits or is fired before the restriction period ends. Conversely, if the executive dies, becomes totally and permanently disabled, or retires before the period ends, all restrictions usually are lifted immediately and the award becomes fully vested.

The major exception to this general practice is found in 11 of the 77 plans, which are set up so that unvested portions of the award are forfeited if the executive dies, becomes totally and permanently disabled, or retires before the restriction period ends. In another nine plans, the forfeiture provisions for death, disability and retirement may differ, as indicated below:

- In three plans, voluntary early retirement is considered a quit.
- In one plan, the award is forfeited unless it was made at least six months before death, disability or retirement; in another plan, the award must be made at least one year before.
- In one plan, the award is fully vested at death; but for disability and retirement, the unvested portion is forfeited if the executive is not 60.
- In one plan, the award is fully vested at death or disability, but unvested portions are forfeited at retirement.
- In one plan, the award is fully vested at disability or retirement, but unvested portions are forfeited at death.
- In one plan, the award is fully vested at retirement, but unvested portions are forfeited at death or disability.

In three other plans, none of the award is forfeited at death, disability or retirement, but must be "earned out" in some cases. For example, in two plans, the award is fully vested at death, but unvested portions must be earned out according to the regular vesting schedule for retirement and disability. In another plan, the award is fully vested at death or disability, but is not fully vested until two years after retirement, whatever the vesting schedule.

Form of Grant

Restricted stock grants may be in one of two forms: actual shares of company stock or "restricted stock units" (RSU's). Seventy-two plans grant actual shares of company stock. The executives are allowed to vote the stock in all but 14 (19 percent) of the 72 plans. In six of these fourteen plans (plus one other) no dividends are paid. Moreover, among the sixty-five plans that do pay dividends, fifty-four currently pay the dividends in cash, seven require that the dividends be deferred until vested stock is delivered, and four plans allow the executive to choose between current cash dividends and deferment of dividends until vesting.

In the 72 plans in which actual company shares are used, shares are registered in the recipients' names at the time of grant. In addition, 33 plans issue share certificates legended to indicate that the shares are subject to the vesting provisions of the plan and deliver them to the executives. In 27 other plans, issued shares are held by the company until vesting occurs. Ten companies place shares in escrow and three others deliver them to a trustee.

Among the five companies that grant "restricted stock units" rather than actual shares, the RSU's cannot be voted. All but one plan currently pays dividend equivalents in cash; in the other plan, dividend equivalents are deferred until vesting. Two companies convert the RSU's into company shares at vesting; one pays cash; one pays half in stock and half in cash; and one allows the executive to choose the proportion paid in cash and in stock.

Taxes and Accounting

On an award of *actual* restricted shares, there are two ways in which the executive can handle the resulting tax: (1) The executive can pay the tax as the restrictions lapse; or (2) within 30 days after the award is made, the executive can elect, under IRS code Section 83(b) to pay the tax in the year the grant is made.

Very few executives make the Section 83(b) election. Among the sixty-two plans for which information is available, fifty-one report no executives making the election; five estimate that only 1 or 2 percent did so; and one reports 10 to 20 percent. However, five say that all of the executives who received an award chose to pay their taxes at the time of the award. Obviously these executives thought that the price of company stock was going to increase significantly over the restriction period. For tax purposes, the value of the award is the fair market value at the time the stock is taxed, and it is taxed as personal service income, and is subject to withholding and the 50 percent maximum marginal federal tax. Any subsequent appreciation is taxed as a long-term capital gain if the stock is not sold for one year after the date of grant. If these executives subsequently forfeit the shares, they cannot claim a credit for the taxes they have already paid—another reason for not making this election.

As a matter of general practice, then, executives who receive an award of actual shares are taxed as the restrictions lapse. Dividends paid during the restriction period are also considered personal service income. The company receives a tax *deduction* at the same time and for the same amount as the tax to the executive; dividends, too, are deductible.[*]

For accounting purposes, the compensation cost of an award of actual shares is the market value at the time of the award. This expense is allocated over the restriction period regardless of changes in the market price during the period; that is, any gain or loss in share value during the restriction period is not considered a compensation expense even though it is tax deductible. For example, if the award value is $50 a share, but $75 at the end of the restriction period, the company gets a tax deduction for $75 even though the compensation expense is only $50 for financial reporting purposes. In addition, most observers believe dividends paid on restricted shares are not a compensation expense even though they are deductible. Finally, for earnings-per-share calculations, restricted shares are considered outstanding shares during the restriction period.

The tax treatment and accounting rules under a restricted stock unit plan are essentially the same as for awards of actual shares. The value of the shares (or cash equivalents) issued at the end of the restriction period is taxed to the executive as personal service income, as are the dividend equivalents paid during the period. The company receives

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[*] Dividends to executives who chose Section 83(b) are not deductible to the company.

Table 5: Partial Vesting Schedules (43 plans)

Full Restriction Period	Number of Plans	Partial Vesting Schedule
2 years	1	⅓ at grant, ⅓ after one year, ⅓ after two years.
3 years	5	⅓ after one year, then ⅓ each year.
4 years	3	25% after one year, then 25% each year (2 plans). 40% after two years, 60% after four years (1 plan).
5 years	17	20% after one year, then 20% each year (11 plans). 25% after two years, then 25% each year (3 plans). 20% after three years, another 30% after four years, and the other 50% after five years (1 plan). ⅓ after three years; then ⅓ each year (1 plan). 60% after three years, then 20% each year (1 plan).
6 years	3	10% each year for five years, other 50% after six years (1 plan). 25% after two years, then 25% each year (1 plan). 50% after three years, other 50% after six years (1 plan).
6½ years	1	20% after two-and-a-half years, then 20% each year.
7 years	2	15% after one year, then approximately 15% each year (1 plan). 20% after three years, then 20% each year (1 plan).
8 years	1	25% after five years, then 25% each year.
9 years	1	20% after five years, then 20% each year.
10 years	9	20% after six years, then 20% each year (6 plans). 25% after four years, then 25% each year (2 plans). 10% after one year, then 10% each year (1 plan).

Table 6: Restricted Stock Awards to Middle Management in 14 Plans

Number Who Receive Award Each Year	Percent of Eligible	Number Eligible
5	2%	300
10	less than 1%	4,500[a]
10	less than 1%	2,000[a]
12	less than 1%	6,000[a]
21	12%	181
21	4%	600
23	less than 1%	2,400[a]
30	1%	2,600[a]
35	18%	200
50	N.A.	N.A.
50	less than 1%	14,000[a]
108	19%	575
200	less than 1%	22,000[a]
206	12%	1,700

[a] All exempt employees

In half of the companies, the entire exempt population is eligible for an award; in the other half, considerably less than the total exempt population is eligible as a practical matter.

a tax deduction for the share value and also receives a deduction for dividend units at the time they are paid.

Similarly, share value at the start of the restriction period is accrued as a compensation expense during the restriction period, except that *changes* in share value during the period are a compensation expense for units that are to be paid in cash. Dividend equivalents are a compensation expense. Share units that are to be paid in actual shares are considered common stock equivalents for earnings-per-share calculations.[9]

Special Award Programs for Middle Management

Fourteen of the ninety-one companies use restricted stock as the form of the payout under special award programs for middle-management employees. Under the program, awards are given to fast-track, exceptional performers, or persons with special skills in management, scientific or technical jobs, or, in at least two companies, to new hires. As a rule, these middle-management people are not eligible for stock options or annual bonus awards.

This is an ongoing program in 11 of the 14 companies; that is, awards are made every year. In the other three companies, there is no predetermined schedule; awards are made intermittently. In the eleven companies with an annual program, five also give restricted stock to top executives.

Relatively few middle-management employees are given an award in any year. Only three companies grant restricted stock to more than fifty employees, as Table 6 indicates.

Another way to describe the group covered is by the salaries of the lowest and of the highest paid. The median salary is around $35,000 per year for the lowest paid and about $100,000 for the highest paid, as the tabulation below indicates:

Lowest-paid Eligible	Highest-paid Eligible
$20,000	$100,000
21,000	100,000
23,000	105,000
24,000	60,000
25,000	79,000
30,000	100,000
31,000	175,000
35,000	75,000
35,000	93,000
40,000	80,000
40,000	88,000
49,000	112,000
53,000	84,000
66,000	525,000

The typical award each year is 30 percent or less of base salary, as the data for ten companies illustrate:

Median Award	Range of Awards
8% of Salary	6% to 12% of Salary
10	8 to 12
12	10 to 20
12	10 to 25
13	9 to 16
20	20 to 25
30	20 to 60
75	50 to 80
100	50 to 200
100 but no more than $60,000	

A recipient of a restricted stock award must stay with the company another two to ten years after the date of the grant before *all* of the stock is available. Most commonly, five years are required before this "full vesting" occurs, as shown below:

Years for Full Vesting	Number of Companies
2	2
3	2
4	1
5	5
2-5 (varies)	2
8	1
10	1

Ten of the plans also provide for "partial vesting"; that is, some part of the award is made available prior to the end of the period needed for full vesting. (In four companies, none of the stock is available until full vesting occurs.)

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[9] For a detailed comparison of RSU's and actual shares, see Carol Meyers Edelstein, "Long-term Incentives for Management, Part 4: Restricted Stock." *Compensation Review*, First Quarter, 1981

These partial vesting schedules are shown below for the nine companies for which data are available:

Partial Vesting	*Fully Vested*
50% after one year; 50% after two	2 years (1 company)
One-third after one year, then one-third each year	3 years (2 companies)
20% after one year, then 20% each year	5 years (3 companies)
25% after two years, then 25% each year	5 years (1 company)
20% after three years, then 20% each year	8 years (1 company)
20% after five years, then 20% each year	10 years (1 company)

In almost all (11) companies, if a recipient of a restricted stock award dies, becomes totally and permanently disabled, or retires before all shares are fully vested, the full award becomes vested immediately. In one company, a recipient forfeits unvested stock if the reason for leaving is disability; at death or retirement, full vesting occurs. In another plan, unvested shares are given to retirees only when the partial vesting schedule is completed; at death or disability, all unvested shares are vested immediately. In a third plan, unvested shares must be "earned out" after retirement or disability; unvested shares are vested immediately at death.

Except for one company with a restricted stock unit arrangement, all of the firms use actual company shares as the form of restricted stock award.

- All but one of these thirteen companies allow the recipient to vote the stock during the vesting period.
- Except for the one company, all pay regular cash dividends to the recipient during the vesting period.
- In three plans, when restricted shares are granted, they are delivered to the recipient. In seven plans, they are held by the company; in three plans, shares are placed in escrow.

In the one company that grants restricted stock units, a recipient cannot vote the stock units. "Dividend equivalents" are paid as regular cash dividends. After full vesting, all RSU's are paid in company stock.

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Glossary

Beneficial Shareholder: The actual or true owner of a security that may be registered under a different name such as that of a broker, an institution, or a depository.

Discount Broker: A broker whose service consists solely of executing purchase and sales orders of securities for investors, as opposed to a "full service" broker who provides investment research and advice.

Class of Security: Corporations issue varieties of financing instruments, sometimes described as classes; for example, bonds and other evidences of debt, various types of preferred stocks, and common stocks.

Institutional Investors: Large purchasers of corporate securities, including insurance companies, trust departments of commercial banks, investment companies, and pension funds.

Investor Relations Executives: Those in a corporation responsible for communicating with the investment community, including financial analysts, the business press, and shareholders.

Line or Segment Data: Profits, sales, expenses and other financial information concerning subsidiaries, product lines or particular activities of a corporation, as opposed to the corporation as a whole.

Option: A contract providing the right to buy or sell a security at a certain price within a specified period of time.

Record Date: The date on which a shareholder is registered on a corporation's books, and is allowed to vote.

Registered Representative: An employee of a brokerage house, registered with the National Association of Securities Dealers, who buys and sells securities for customers, and offers investment advice. Sometimes referred to as an account executive or broker.

Security Analyst: An individual whose function it is to evaluate corporate and governmental stocks, bonds and other securities, and make recommendations thereon.

Street Name: The name of a securities firm or institution under which securities are registered. The actual owners of the securities are clients of the organization.

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Introduction

> "Publicity is justly commended as a remedy for social and industrial diseases. Sunlight is said to be the best of disinfectants; electric light the most efficient policeman."
>
> —Louis D. Brandeis,
> *Other Peoples Money,* 1914

Two courses of action are open to lawmakers seeking change in social and economic policy and practice. One is to legislate the desired changes, requiring certain practices to cease or be modified, or new courses of behavior to be undertaken. The other alternative is to demand information.

It is this second alternative, mandating the disclosure of relevant data, that often distinguishes the U.S. system of government. Its underlying assumption is that the ordering of social and economic policy is best left to the consuming public—or publics—whose members will effect what change is required so long as they have sufficient and accurate information on which to base their decisions. Through the power of their dollars—their purchases or investments—the argument holds, the public will compel economic and social institutions to respond favorably.[1] Even a cursory review of major legislation enacted during the 1970's reveals how much emphasis lawmakers placed on disclosure—often by itself, but occasionally in addition to practical change. In real estate and land sales, banking transactions, occupational safety, advertising, pensions, credit practices, consumer protection, traffic safety, and numerous other areas, major laws were passed requiring, primarily, the release of information. To cite one example: Following years of complaints that banks were disinvesting in minority neighborhoods, thereby precipitating urban deterioration, Congress passed the Home Mortgage Disclosure Act of 1975. (Title III, PL 94-200). Rather than proscribe the practice of disinvestment, the Act required lending institutions to indicate the number and amount of loans they were granting in each census tract within their respective communities. Bank customers might then determine whether their particular neighborhood was being deprived of a sufficient percentage of loans, and could respond by withdrawing their accounts, or by requesting a regulatory agency to deny the lender certain privileges.

A belief in the efficacy of publicly available information can be found in two of the nation's bellwether disclosure laws—the Securities Act of 1933 and the Securities Exchange Act of 1934—which date back to the New Deal, and pertain to the flow of information between corporations and their shareholders, and between securities dealers and exchanges. At the time of passage, the economy was in the throes of the Great Depression, a breakdown that many attributed to, among other factors, the misallocation of capital and the related lack of constraints on speculative and fraudulent practices within the stock market.[2]

The frenetic and haphazard pace at which capital was raised in the market, according to numerous critics, bore little relationship to where such capital was needed for optimum productivity. As a remedy, influential voices within and outside the government called for a strong policy of central industrial planning including, for example, "an NRA for finance."[3] But framers of the disclosure laws specifically rejected such a notion, upholding instead the view that what was required was the open presentation of all relevant information about the stocks, bonds and other securities that corporations were to issue for sale. In his introductory message to the legislation, President Franklin D. Roosevelt, who had been influenced by Supreme Court Justice Louis D. Brandeis' philosophy, said: "There is. . .an obligation upon us to insist that every issue of new securities to be sold in interstate commerce shall be accompanied by full publicity and information and that no essentially important element attending the issue shall be concealed from the buying public. This proposal adds to the ancient rule of caveat emptor, the further doctrine 'let the seller also beware.' It puts the burden of telling the whole truth on the seller. It should give impetus to honest dealing in securities and thereby bring back public confidence. The purpose of the legislation I suggest is to protect the public with the least possible interference to honest business."[4]

About This Research

Business professionals involved in the disclosure and analysis of information today find their functions increasingly affected by two major developments: the availability of high technological equipment such as computers and word processors, and the trend towards deregulation. An exploration of the specific—and evolving—impact of both developments on the activities of the professionals is the purpose of this study. Information in the report is based on responses to multiple-choice questionnaires received from the following three groups of experts: 403 investor relations executives in publicly held companies with at least $50 million in annual sales; 116 registered representatives affiliated with the Institute of Certified Financial Planners; and 75 security analysts who are members of the Financial Analysts Federation.

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[1] Russell B. Stevenson, *Corporations and Information: Secrecy, Access, and Disclosure.* Baltimore: Johns Hopkins University Press, 1980, page 196.

[2] See for example testimony of Walter W. Heller in *The Great Depression: Can It Happen Again?.* Hearings before the Joint Economic Committee, 96th Congress, First Session, October 29, 1979. Washington, D.C.: U.S. Government Printing Office, 1980, p. 22.

[3] Joel Seligman, *The Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance.* Boston: Houghton-Mifflin, 1982, esp. Chapter 2.

[4] Cited in William E. Van Valkenberg, "Corporate Disclosure Under the Securities Act of 1933 and the Securities Exchange Act of 1934: A Historical Perspective," *Report of the Advisory Committee on Corporate Disclosure to the Securities and Exchange Commission.* Washington, D.C.: U.S. Government Printing Office, November 3, 1977, Vol. 1, page 557.

While even this position generated considerable corporate and securities-market opposition, disclosure of financial information has long since become a regular, institutionalized practice of all publicly held companies, and a generally accepted principle of both corporate and societal conduct. "Just as information is essential to the ability of large corporations to manage our most important economic resources," writes law professor Russell B. Stevenson, "it is equally essential to the ability of the society to govern the behavior of those corporations."[5]

Nor is it only purchasers of corporate securities who demand and expect sufficient information on which to base their investment decisions. Corporations insist on information about those same purchasers. Executives want to know *who* their shareholders really are, as opposed to merely having the name of the institution representing them. While this demand is seldom met to the satisfaction of the corporations, it is a demand made all the more pressing of late by the extraordinary growth of institutional investors, the increasing use of "street name" registration of shares by brokers, and the growing use of central depositories in which the shares are recorded.

Social policy and corporate governance, furthermore, are only two of the reasons underlying the relentless appetite for information. A third reason is that entire professions depend upon it. In particular, financial analysts and stockbrokers, two of the intermediaries between corporations and their shareholders, require a steady stream of data for the proper performance of their primary functions: evaluating securities and making informed investment recommendations to their clients.

It would seem that, with legislators, corporations, stockholders and financial professionals all agreed on the importance of timely and sufficient information, harmony should characterize the disclosure process. The reverse, in fact, is often the case. For, while the need for information is shared by all parties, the desire to withhold data sought by others is also prominent—understandably so, given the sometimes adversarial nature of the relationship among the participants. Security analysts and corporate executives, for example, do not always see eye-to-eye about the value of a particular corporation's stock, or about the type and quantity of information needed to form proper evaluations. A recent poll, undertaken by the Louis Harris organization, revealed that as many as 60 percent of top corporate executives feel that the worth of their company stock is undervalued by Wall Street firms, with the percentage rising within specific industries.[6] And in the pages that follow, readers will see that the most common complaint from security analysts is an absence of sufficient segmental or line data from corporations—an absence that is said to influence the analysts' professional judgments.

Disclosure and Stock Prices: The Investor-Relations View

While security analysts respond negatively to any trend that reduces the amount of information corporations have to disclose—for example, information regarding executive compensation in proxy statements, registration statements accompanying securities issued under the "shelf registration" rule, and so forth—most investor-relations personnel are not worried that a decrease in disclosure will adversely affect the value of their company's securities.

Among the explanations offered by investor-relations respondents for this position are: (1) Evaluations take into consideration the position of the firm relative to other firms in the same industry, and since those other firms are also reducing their disclosure, no one firm's securities will be adversely affected. (2) "Since we have always provided more disclosure than required, these new requirements will probably not have an impact on the price of our stock." (3) "Adequate disclosure will be made, required or not"; and "We will disclose anyway, it is the right thing to do." (4) "Most of the information no longer required has had nothing to do with the investment process."

For a presentation of corporate views on all fields of regulation, see James Greene, *Regulatory Problems and Regulatory Reform: The Perceptions of Business*. The Conference Board, Report No. 769, 1980.

The contrast in perception and attitude can be striking. While almost 90 percent of the 402 corporate investor-relations executives surveyed felt that the reduced level of required disclosure, resulting from the deregulatory policies of the present Administration, will have no effect on the price of their firms' securities; more than three-quarters of the securities analysts surveyed were "concerned" about this same reduced level (a third were "very concerned"). Many stressed that there is indeed a correlation between reduced information available to them and a lower value accorded the securities. "If you have two companies in the same industry," explained one analyst, "and one files all the information, and the other files less information, you are going to have a reaction. I am not saying you will be biased, but it is human nature to be irritated if you are deprived of what you need." Another respondent commented: "More and more analysts will shy away from these companies. I do it myself. After all, who needs this?" While not all analysts agreed that security prices would decline, the majority expressed displeasure over any reduction in disclosure.

As another example of disparity in attitude between corporations and the investment community, three-quarters of the investor-relations executives surveyed said they would like to be able to communicate with their actual or "beneficial" shareholders; most cited "good management practice" as the main reason. But among registered representatives, the people who retain the names of those shareholders, concern for such communication was almost completely lacking. Almost none of the registered representatives answered the question of whether or not they made the names of their clients (the shareholders) available to the corporations. Forty percent did not know whether the brokerage firms they worked for received such requests in the first place. When informed that new SEC rules will require them to release the names of the shareholders by January 1, 1985, the general response was one of limited interest. Over a third of the representatives said the new rule would have no effect on their work; another third said they were not sure what effect, if any, the ruling would have. One out of seven said it would hinder their work.

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[5] Stevenson, 1980, page 5.

[6] "Companies Feel Underrated by the Street." *Business Week*, February 20, 1984, p. 14.

In light of this relative lack of concern among brokers for the communications problems of corporations whose stock they sell, it is not surprising that more than 40 percent of the corporate officials who responded to the question said that they "rarely" or "never" requested the names of their shareholders from brokers and dealers. The reason? Most felt that their requests simply would not be honored.

To be sure, 50 years of disclosure regulation have enabled the various participants in the process to coordinate activities in recognition of their mutual interdependence. Thus there is, in general, as much cooperation as discord. Most of the analysts surveyed do express satisfaction with the type and amount of information they receive from corporations, even as they would like to see some changes. Similarly, most of the investor-relations executives (IR's) and registered representatives say they are basically satisfied with the way the Securities and Exchange Commission enforces the disclosure laws.

But while the process has been relatively stable, new winds are blowing that promise to roil the waters. Rapidly accelerating developments in two areas—high technology and deregulation—are creating new obstacles and new options. Often these developments clash head-on: While deregulation, for example, permits less disclosure, the new financial functions allowed by deregulation (for instance, brokerage services provided by banks), as well as the increasing availability of sophisticated, data-hungry technology, makes more disclosure imperative.

How the new technology and the current forms of deregulation affect participants in the disclosure-access process is the subject of this study. Although it covers the major technological equipment used by the respondents, and the key deregulatory initiatives affecting them, the report is by no means exhaustive. This is perhaps inevitable, as both the new technology and current deregulatory policies are themselves evolving. (In some cases, paradoxically, they may even be reversing themselves, as pressures are exerted for additional regulation by interests normally favoring less government oversight.)

Futurists have described the technological era as an age of information. To the extent that they are correct, the transmission and use of that information—the disclosure-access process—takes on ever-increasing importance to individual companies, to the economy, and to the society as a whole.[7] As such, disclosure—or "publicity" as Justice Brandeis said—will be recognized as far more than a "remedy for social and industrial diseases." It will be seen, if it is not already so accepted, as integral to the very functioning of business and social life.

Technology

On March 22, 1984, the Securities and Exchange Commission asked corporations a series of questions. One of them was: "Do you prefer that communications be asynchronous or synchronous?" And "half duplex or full duplex?" Another question asked which "character sets" they used, such as ASCII, ASCII-2, or "other." In terms of "line speed," the Commission was very interested in knowing not only the highest the corporations now utilize for filing transmissions, but the highest they desire for logon and signoff. And when it came to graphics, the SEC queried the corporations on how they would "signify the beginning, end, scan density and compression."[8]

It was not too long ago that questions like these could only be answered, let alone formulated, by a relatively small group of engineers, systems analysts, and computer programmers. That they are now a normal part of the discourse among government agencies, corporate officials, and the financial community is an indication of how widespread the use of recently esoteric technology has become. Indeed, the rapidity with which computers, word processors, and their relatives are becoming ubiquitous in the business world makes almost any attempt to quantify their use outdated as soon as the measurements are taken. Three or more years ago, for example, only about one-third each of the security analysts and registered representatives surveyed used some form of computerized equipment—either a personal computer, a videotex system, a revamped or multifunction quote terminal, a terminal connected to a large mainframe, or a word processor. Two years ago, according to the respondents, the number of users jumped about 17 percent for both professions. Last year about another fifth of both groups entered the high-tech world, and as of this writing, 95 and 96 percent, respectively, of analysts and brokerage workers are at home with such machines. The situation for investor-relations executives is equally dramatic. Today, 75 percent of the IR respondents use some form of high-technological equipment in their daily work (and about half of the remainder plan to do so within the next two years). Three years ago the number of users was under 3 percent; two years ago a quarter of those responding used it; last year another 40 percent became involved.

Specific details on who uses what equipment appear on page 10. For the moment, the significant fact is that all three groups of business professionals in this survey—analysts, brokers and investor-relations executives—are now overwhelmingly operating relatively new technology for the purpose of disclosing and obtaining ("accessing") corporate information. This development is not lost on the Securities and Exchange Commission, the regulatory agency that oversees this function. In fact, the primary reason the SEC was asking those jargon-filled questions is to prepare for the introduction of a completely revamped system of corporate and financial disclosure: a system to be known as EDGAR.

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[7] For an exploration of regulatory issues affected by technology managers who transmit corporate and financial data internationally, see James Basche, *Regulating International Data Transmission: The Impact on Managing International Business*. The Conference Board, Report 852, 1984.

[8] Securities and Exchange Commission, "Filing, Processing and Information Dissemination System." Release Nos. 33-6519; 34-20785; File No. S-7-12-84.

Proxy Implications of EDGAR

An electronic filing and registration system could have significant implications for proxy dissemination. According to SEC Commissioner Lee B. Spencer, corporations might find the problem of getting proxy information to shareholders long enough in advance to secure adequate voting simplified. "Once the information required in a proxy statement is inputted into a computer system the issuer could notify by electronic mail the owners of stock that a vote was upcoming. These stockholders or their nominees could access the information in their personal computers and then by computer message indicate the appropriate vote."

Edgar: The Electronic Library

Recently, corporate volunteers were sought by the SEC to participate in a pilot electronic-disclosure system that "will permit corporations to make their required filings electronically and allow investors, securities analysts and the public to instantly access such information on home and business computer screens," according to the SEC questionnaire. The reason for establishing EDGAR—which stands for Electronic Data Gathering—is that the existing paper-disclosure system, in use for half a century, is proving inadequate to meet the needs of today's investing public. The SEC "has recognized for some time that the potential use of the information contained in corporate filings has not been fully realized by analysts or investors," the Commission stated. "With the adoption of the integrated disclosure system [which combines the filings required under the two disclosure acts], a new data base framework for filed information has been created. The Commission is committed to providing the public with convenient and immediate access to this data base."[8]

Anyone familiar with the existing system for retrieving corporate or shareholder information from the SEC's filings is aware of the time-consuming methods involved. There are microfiche screens on long tables in the Commission's public access rooms (in Washington, D.C., and in the regional offices) at which users transpose the data they seek by hand. Above the sound of the scratching pens can be heard the steady clang of coins being inserted into the nearby photocopying machines, while harried clerks rush back and forth to retrieve the particular files sought by analysts and other members of the public.

The amount of time and effort consumed by this method can make even the most avid information gatherer weary of the process. Furthermore, as the SEC has only nine regional and six branch offices around the country, access to the documents becomes difficult for anyone not living near a major city. While some data have been offered "on line" (that is, accessible to computers) and by mail subscription for several years, the cost is high, particularly for the small, independent investor. What the EDGAR system represents is a complete overhaul of the present process.

Planning for this computerized registration-disclosure system—a system estimated to cost about $50 million over a five-year period[9]—was hinted at almost two years ago. In an address delivered to the American Bar Association, Lee B. Spencer, Jr., director of the SEC's division of corporation finance, noted that the "microcomputer now makes it possible for security analysts, sitting at their desks, to have instant access to prodigious amounts of information about a company. Moreover, the software is now available to massage that data using a variety of assumptions. For example, one of several databases makes available a minimum of 900 pieces of information about each of 6,000 companies. With the push of a button, a securities analyst can generate an almost infinite number of ratios and other data with regard to these companies. At no stage of this process is it necessary for the analyst to look at hard copy annual reports or prospectuses."[10] (Development of financial ratios, incidentally, is the primary purpose for which most of the analysts surveyed use their computer equipment.[11]) See Table 1.

Spencer noted that the very development of improved computer capabilities has already influenced the way the SEC enforces the disclosure laws. The increasing accessibility of market information, resulting from the combination of computers, "an extensive network of aggressive research analysts," and the "strengthened disclosure scheme which grew out of the 1964 amendments to the Exchange Act," have enabled the SEC to require less "hard copy" or paper information through the use of short-form prospectuses.[12] In fact,

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[9] Kenneth Fogash, SEC Deputy Executive Director, in remarks before the American Society of Corporate Secretaries, February 29, 1984. Cited in *Daily Report for Executives.* March 15, 1984, page A-1.

[10] Lee B. Spencer, Jr., "The Electronic Library." remarks before the American Bar Association's Federal Regulation of Securities Committee, November 9, 1982 (Available from SEC, Washington, D.C.)

[11] For a detailed discussion of financial ratios as a management tool, see Francis J. Walsh, Jr., *Measuring Business Performance.* The Conference Board, Research Bulletin No. 153, 1984.

[12] The 1974 amendments basically extended provisions of the disclosure laws to many companies that were not listed on the national securities exchanges.

Table 1: How Security Analysts Use Technology

Use Computer to Obtain Information on	*Percent of Respondents*[1]
Financial ratios	61%
Forecasts of company earnings and sales	49
Credit ratings and other credit issues	19
Conditions within the industry	15
Domestic economic and social conditions	14
International economic and social conditions	11
Dividend policy	11
Management strategy (e.g., capital investment plans)	9
Accounting policy	7
Government regulation	5
Labor relations	5
Management philosophy	5
Other (security quotes, security holder information, portfolio analysis, rate-of-return projections)	21

[1] Multiple responses.

he predicted the eventual elimination of paper reports and paper prospectuses. Because the information transmitted electronically would be instantly available to analysts, market functioning would be enhanced—or at least speeded up—at a lower cost to both the government and the market.

Because EDGAR is still only a pilot project that the SEC is preparing for, most investor-relations executives and security analysts do not yet know whether they will cooperate with the service. Two-thirds of the surveyed IR officials responded "not sure" to the question of whether they will connect to the new electronic system, and almost a fifth indicated they would not participate. Similarly, 6 out of 10 analysts indicated that they were not sure whether they would use the system; another 10 percent said they would not. When asked how they thought the electronic system would affect their work, over a third of the analysts did not know, and only a quarter indicated that they would find the system "substantially" beneficial.

Such hesitancy may be explained by the fact that the technology is still new, and that, while almost all the analysts and brokers are using it, not everyone is finding it indispensable. Even with the computer, a substantial 40 percent of the analysts still cannot get information that was previously unavailable. Furthermore, for most of the analysts (61 percent), the most important type of corporate-released information has nothing at all to do with technological equipment; they value "private meetings with key executives" more than any other source. While shareholder and 10-K annual reports are also highly valued, the written data were less often rated as being "very important" by the analysts than were the personal meetings. And some forms of technology, notably video discs and tape recordings, have almost no importance for this group of respondents. (See Table 2.)

Technology and Investment Advisers

When the pilot electronic library becomes a full-fledged system, the corporate and financial data will be available not only to issuers and the financial community, but to the general public as well. Indeed, the increasing popularity and availability of home computers will enable almost any investor—and eventually almost every investor—to obtain such information, thus becoming his or her own disclosure expert. What will this mean for analysts and brokers? Will their jobs even be necessary? Will their functions go out of existence, given the ease with which complex financial ratios and evaluations of various company securities can be performed?

These are not idle questions. Early press reports, as well as conversations the author has had with several people in leading brokerage houses, indicated a considerable fear, at least among the representatives, concerning the potential impact of the new technology. During interviews, some brokers went so far as to oppose providing customers with research information via a videotex (telephone-TV hookup) system, for fear that customers would use that data to make their own decisions, and then purchase or sell securities through a discount broker. According to an article in *The New York Times,* officials of the leading Wall Street firm

Table 2: Analysts' Rating of Corporate-Released Information (75 Respondents)

	Percent Rating		
Type of Information	*Very Important*	*Important*	*Slightly or Not Important*
Private meetings with key executives	65	25	8
10-K reports	56	32	11
Annual shareholder reports	54	41	6
10-Q reports	38	40	22
Company tours	27	27	46
Proxy statements	25	36	39
1933 Securities Act registration statement	25	30	53
Management presentation to analyst society members	18	41	41
Reports of company insiders	18	19	63
Company press releases	12	37	51
Video discs and tape recordings of annual meetings	—	3	97
Phone calls into annual meetings	—	2	98

How Computers Affect the Broker's Work

For some registered representatives, one of the most frustrating things about the computer is that it demands attention. Asked how their job function has been altered, a few representatives responded that they now spend more time trying to understand the computer than they do dealing with their customers or with other aspects of their job. Typical comments: "I spend too much time at the computer." "I'm trying to understand software application." "It takes time to show [coworkers] how to use the equipment and to do illustrations for other brokers."

For many, however, there are considerable improvements in their brokerage activity. Among typical responses were: the ability to work four to five times as fast; to do more intensive asset tracking; to obtain more client updates; to provide faster client service; to plan more "what ifs," (that is, to devise alternative investment strategies); and to undertake more complex functions such as tax and financial planning.

The most common activity that brokers no longer do is manual calculations, according to questionnaire respondents.

that announced a new videotex service to customers conceded, at least at the start, that "broker opposition was a major concern."[13] And a registered representative who deals mainly in the convertible bond area at another major brokerage house in New York stated in an interview with the author that most older representatives of his acquaintance—those who had not been exposed to computers and related technology in school—were worried about the eventual loss of their jobs. "In the next four or five years, the traditional role of the broker will be eliminated," he said. He added that the broker's function would evolve from advising, buying and selling to monitoring, evaluating and devising more creative alternatives for clients. Older representatives, he implied, would not be comfortable either with the change in responsibility or with the new equipment.

The findings in the present survey are mixed. On the one hand, passage of time seems to have allayed much of the concern about the loss, or significant transformation, of the representatives' jobs resulting from the new technology. Three-quarters of the respondents did not think their jobs would become obsolete through the application of the computer to their functions. And over half (56 percent) were not concerned that they would lose business—that their clients would simply use the research data newly available to them and then go to a discount broker to conduct a market transaction.

On the other hand, a third were indeed concerned that individual investors might someday be able to buy and sell securities without going through a broker. Such an eventuality would require either a change in the 1934 Securities and Exchange Act, or the registration of thousands of individuals as dealers, but even without such a change, a third of the representatives chose to agree with the comment that "computer technology will encourage investors to make more of their own decisions and rely less on brokers."

On balance, however, worry about technology is not too widespread among representatives. Perhaps one explanation can be be found in the response to yet another question. Representatives were asked if their jobs, in fact, had become more or less complex during the past five years. Overwhelmingly (85 percent) the response was "more complex." The main reason for this judgment, according to three-quarters of the respondents, was the new types of securities that have been introduced on the market—such items as options on indexes and subindexes, futures, and so forth. The second most frequently cited factor accounting for the increasing complexity of the broker's job, was "computers and other new technology"—about 39 percent referred to this. Legal and regulatory developments were also cited as important by a third of the respondents. Thus, at least among most brokers, early fears of what the computer would do to their livelihood have given way to confidence that their jobs are now even more necessary.

Some representatives, in fact, see client access to "broker's" data in an especially positive light. "The informed customer is the best customer," one respondent noted. Another commented: "The computer saves time in giving quotes and information. Greater customer education and information could provide significant public pressure to increase professionalism in the brokerage industry." And a third felt that the access to market data gave his customers "a better understanding of my recommendations."

Security analysts, too, are not worried about computers making their jobs less important. Asked how they felt about clients using new technological equipment to do their own analysis of corporate securities, nearly nine out of ten analysts replied that they were "not at all concerned." Almost none feared that their own professional function in the marketplace would become less necessary. The reason for this optimism is a belief in the value of analytical skill and intellect, subjective factors that so far have not been duplicated by machines. "Experience and training as a security analyst will provide an edge," was a typical explanation. Another noted that the "computer is still a tool—the analyst must still make the decision based on information presented." A third felt that clients, for the most part, would not want to do the analysis: "It takes a lot of work, of the dry type that most people do not like or actively avoid." And a fourth placed the computer revolution in a human perspective: "You can't put management on a computer," he said. "Data are often unreliable and subject to revision."

Notwithstanding this conviction, half of the analysts feel that their jobs will change "significantly" as a result of technological innovations. The change will be in two separate directions: on the one hand, more sophisticated; on the other, less time consuming. The greater sophistication will result from the fact that the increasing availability of data allows for "more penetrating analysis and question-

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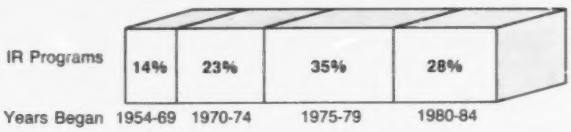
[13] "E.F. Hutton to Start a Videotex Service." *The New York Times,* June 3, 1983.

Chart 1: Start of Investor-Relations Programs
(228 Companies)



ing," according to one respondent. Another respondent noted: "Breadth of company coverage per analyst will increase." Most felt that the decreased amount of paperwork required will save time.

Technology and Investor Relations

When EDGAR comes into being, it will have had a distinguished ancestry, dating back at least as far as the mid-1940's when its great grandparent, the 30-ton ENIAC (Electronic Numerical Integrator and Calculator) was born. Since then, developments in the compilation and processing of information—from hand-held caluculators to personal computers—have been so profound and enormous as to merit the oft-applied term "revolutionary." Immense innovations in the transmission of data have also occurred. Interactive video, cable television, satellites, photonics (a system that uses light beams, rather than hard copper wires) are today taking their place alongside printed materials and telephones as the means by which we send and receive information.

So vast is the impact of the new technology on society that some observers consider information itself to be a separate economic sector. According to the Congressional Office of Technology Assessment, the information sector, "if defined broadly, already accounts for over 60 percent of the economic activity of the United States." Business, furthermore, is "beginning to treat information as a factor of production that takes its place alongside the conventional factors of land, labor and capital."[14] (See box on page 10 for other factors in the growth of the investor-relations function.)

Disclosure of, and access to, information, then, is emerging today as a *central* economic function, both for the larger economy and for individual businesses—an undeniable consequence of the technological revolution. IR respondents to the survey indicate that two-thirds of the corporate investor-relations programs were formally established only within the last nine years—35 percent in the latter half of the 1970's and another 28 percent in the four years leading to the present. (See Chart 1.) Prior to the 1970's, most of the activities pertaining to disclosure were handled as a part-time activity of the following: the chief financial officer (37 percent of those responding to this question); the treasurer (18 percent), or the CEO (16 percent).

Technology and Productivity

Almost two-thirds of the registered representatives said that computer technology had increased their productivity—measured by sales increments—but the gain was modest in size. For example, of those crediting the computer for added productivity, less than one in five said their productivity had reached a 50% improvement level. Another fifth reported increases of less than 50%. Gains of 100% or more were cited by only one in seven.

While measurement of productivity in the investor relations function is difficult if not impossible, a little more than half the investor relations practitioners surveyed felt that their productivity had in fact increased as a result of using new technological equipment

It is a measure of the current importance of information disclosure that investor relations continues to be a responsibility of those three executive departments, *along with* the investor-relations department itself. The survey revealed that chief financial officers retain primary responsibility for investor relations, either by themselves or in conjunction with another executive in almost two out of five firms responding. Primary responsibility in another 16 percent of the companies rests with the CEO. Over a third of the responding corporations have established a separate investor-relations department. (See Table 3).

Perhaps a clearer depiction of the significance of the disclosure function in U.S. corporations is found in the organizational status of the function within the responding firms. Half of the top investor-relations officials now report directly to the Chief Executive Officer; another quarter report to the Chief Financial Officer.[15]

Newly articulated management principles, furthermore, would seem to strengthen the significance of investor relations. In particular, the notion that corporate asset management should have, as its fundamental purpose, strategies to "increase the wealth of the shareholders in a manner that is consistent with the corporation's responsibilities to its other

Table 3: Who Handles Investor Relations?

Primary Responsibility	*Percent*[1]
Chief Financial Officer	38%
Investor Relations Dept.	36
Chief Executive Officer	16
Corporate Secretary	15
Corporate Communications	13
All other (e.g., marketing, treasurer, public relations, counsel, etc.)	53

[1] Figures do not total 100% because, in at least a third of the firms, more than one executive or department shares primary responsibility.

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[14] U.S. Congress Office of Technology Assessment, *Information Technology and its Impact on American Education: Summary.* Washington, D.C.: September, 1982, page 11.

[15] Developments in various aspects of corporate financial management are discussed in Patrick J. Davey, *New Patterns in Organizing for Financial Management.* The Conference Board, Report 839, 1983.

Why the Investor-Relations Function Has Grown

The technological revolution, which has transformed information itself into a basic economic category, according to the Office of Technology Assessment, is one of the primary factors accounting for the growth of the investor-relations function.[1] Other factors, described in interviews and in recent literature, include:

(1) Realignment of Wall Street firms during the 1970's, which resulted in the dismissal of analysts available to follow corporations—and hence, increased corporate activity to gain attention;

(2) Increase in disclosure requirements enacted during the 1970's;

(3) Corporate mergers, making the "mission" of the hybrid companies difficult for analysts as well as the public to comprehend;

(4) Growth of the number and size of institutional investors;

(5) Competition for the individual investor's dollars vis-a-vis commodities, real estate, insurance, art and antiques;

(6) Competition with government borrowing.

[1] For a comprehensive treatment of the investor relations function, see Phyllis McGrath, *Communicating With Professional Investors*. The Conference Board, Report No. 644, 1974.

shareholders (employees, customers, suppliers, etc.). . . .The objective is *shareholder wealth maximization*. . . .[16]

This principle coincides with the finding in the survey that investor-relations executives consider their most important function to be "increasing the value of shareholders' equity." Almost half of the respondents cited this issue as number one, considerably more than indicated other functions—even closely related ones, such as attracting potential investors and increasing analyst interest in their firms. (See Table 4.)

Analysts' interest is, of course, important, but the aim is not necessarily to increase such attention. It is, rather, to ensure that those analysts who do follow the company have the type of data needed to make "fair" evaulations. Thus, almost one of every five IR executives spends up to 50 percent of his or her working day making presentations to security analysts—apart from the time spent at official analyst society meetings. (It is not surprising, then, that 87 percent of the analysts surveyed expressed satisfaction with the type and amount of corporate-released information they receive, even while they are uneasy about the trend towards decreasing disclosure under deregulation.) The only other activity that takes up so much of the IR practitioners' time is an intracorporate one: communicating with departments and executives within their own firms. This may be attributed to the fact that most IR executives report directly to top management.

It is rare for any other single IR responsibility to account for more than 25 percent of the practitioners' time, according to the survey. Such activities include preparation of annual and quarterly reports; preparation of other printed materials, such as financial press releases; attendance at shareholder meetings; communicating with the SEC and other rule-making bodies; and generally attempting to improve the flow of communication to shareholders. (See Exhibits 1 and 2.)

Table 4: Purposes of Investor Relations (Ratings by 402 IR Respondents)

Purpose	*Most Important*	*Second Most Important*
Increasing value of shareholders' equity	47%	17%
Increasing analysts' interest in company	17	31
Attracting potential investors	16	34
Improving shareholder communications	8	2
Meeting regulatory requirements	7	4
Increasing shareholder loyalty to management	4	6
Preventing takeover attempts	0.5	0.5

Use of the Equipment

The proliferation of personal or mini-computers by the end of the 1970's gave rise to the view that the written word was facing extinction. That dire prediction has not yet materialized. In fact, a whole new field of publishing has emerged: At last count, there were 123 magazines devoted to computers alone, according to Standard Rate and Data Service, as well as a veritable library of books and newspaper columns devoted to the subject.

Writing has not only survived the technological revolution, it has made widespread use of it. As most investor-relations executives tend to be writers (or to have writers on their staffs), it would follow that the type of technology most often used by the practitioners are word processors, best described as computerized typewriters. Over 57 percent of the IR respondents use word processors, either alone or in conjunction with other equipment, on the job, and 83 percent use whatever other electronic equipment they have for their written work. Fewer than a third use personal computers.

On the other side of the disclosure process—the receiving or access side— the situation is reversed. Two-thirds of the analysts and three-quarters of the brokers or registered representatives use personal computers, while less than a third in both cases use word processors. And if the investor-relations people use electronic equipment primarily for writing, the financial professionals use it primarily for numerical analytic purposes. Following is a more detailed breakdown of the uses to which the participants in the disclosure process apply their new technology:

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[16] Allen H. Seed, III, "New Approaches to Asset Management: Part I," *Intercontinental Advanced Management Report*. Vol. 4, No. 7, page 1.

Exhibit 1: Director of Investor Relations' Duties in a Motor Vehicles and Equipment Corporation

Functions and Responsibilities
Corporate Organization

SUMMARY

The Director of Investor Relations, reporting to the Vice President and Treasurer, plans and conducts a program of two-way communication with and service to professional investors to foster their accurate assessment of the corporation from an investor's perspective.

SPECIFIC RESPONSIBILITIES

(1) Serve as the central planning, contact and coordination point between the corporation and the professional investment community, particularly as to analysts' visits, investment-group presentations, and information for investment firms.

(2) Maintain close liaison with corporate communications and legal departments with respect to the communication of company operations and financial matters.

(3) Develop channels within the investment community for learning what reports, comments and rumors concerning the company may be circulating and see that appropriate management officials, including the Vice President-Secretary and Assistant General Counsel, are notified.

(4) Advise on the timing, development and content of financial news releases, shareholder reports, and other publications of investment interest.

(5) Monitor and report to management on significant changes in ownership of the company's securities by types of owners, size of holdings, and geographical spread.

(6) Record and report to management on the price and volume trends for securities of the company and competitor companies and chronicle the factors causing significant changes therein.

(7) Cultivate personal acquaintanceships with key personnel of professional investment firms and individuals and develop specialized knowledge of the overall composition and mechanics of the investment world.

(8) Distribute to management reports by financial analysts on the company and the industry, reflecting opinions and attitudes concerning investments in same, and maintain files of these data.

(9) Assist in planning and make physical arrangements for shareholder meetings and assist in other shareholder matters as required.

(10) Respond to or coordinate responses to communications from shareholders.

(11) Establish and provide for the mailing of financial reports and supplemental data to financial analysts and portfolio managers in the United States and abroad.

- Among registered representatives, about one out of eight uses a computer or related equipment for portfolio analysis, keeping themselves abreast of such factors as their clients' tax brackets, capital gains and losses, pension and insurance plans, and so on.
- One out of ten brokers uses it for devising technical analyses of various securities—manipulating opening and closing stock prices, volume of shares traded, price/earnings and other types of ratios, bond calculations, options strategies, and so forth.
- One out of 20 registered representatives uses the computer for what may be called "housekeeping" operations—keeping daily calendars, making automatic phone calls, conducting correspondence, and the like.
- A similarly small proportion use their electronic equipment for "other" functions, such as general financial planning, income-tax preparation, accessing and managing a data base, and word processing.
- Just under half of the representatives, like the security analysts, use their equipment for more than one purpose.

Among the analysts, the equipment is used for obtaining information in two primary areas: financial ratios (61 percent) and forecasts of corporate earnings and sales (50 percent).[17]

Investor-relations executives use their electronic equipment overwhelmingly (83 percent) for writing: 46 percent for all the required annual, quarterly and interim reports, and 37 percent for other types of writing, including press releases, newsletters, and so forth. However, almost half also use computers for compiling and storing data, or for preparing internal files, and a quarter have found it useful to access external data bases. A little over a third employ more than one type of equipment.

What Is Not Being Used?

To some observers, the technological revolution consists primarily of the widespread use of computers, but it actually encompasses a cross section of very different technologies—video, satellites and photonics, for example. While all of these areas are basic to the transmission of information, and in turn

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[17] For a fuller treatment of this factor, see Francis A. Lees, *Public Disclosure of Corporate Earnings Forecasts*. The Conference Board, Report No. 804, 1981.

Exhibit 2: Job Description—Investor Relations Manager in an Engine Bearing Corporation

SALARIED JOB DESCRIPTION

Division: Corporate Staff
Job Title: Investor Relations Manager
Department: Finance—Corporate
Reports To: Vice President & CEO

FUNCTIONAL DUTIES AND RESPONSIBILITIES:

General Function

Under general supervision develops an effective investor communications program including written material, meetings, and the like for various investor groups including shareholders, financial analysts, etc.

Duties & Responsibilities

(1) Assist in the arrangements for and conduct of group meetings with financial analysts and brokers, both at headquarters and in key financial centers. This work would be done in cooperation with the Vice President-Finance and Administration, and the Corporate Communications Department.

(2) Establish and attend meetings with individual analysts and brokerage officials in key financial centers for the purpose of alerting those individuals to the company's prospects.

(3) Follow-up communication with analysts and brokers to keep them abreast of important company developments.

(4) Handle inquiries from members of the financial community.

(5) Handle inquiries from shareholders as directed.

(6) Assist in the development of corporate annual and interim financial reports as well as other publications associated with the investor-relations function (fact brochures, special reports on new product areas, material tailored specifically for brokers, etc.)

(7) Assist in the arrangements for the corporate annual meeting.

(8) Develop communications materials directed to existing shareholders, including employee shareholders, for the purpose of retaining their loyalties.

(9) In cooperation with the Vice President, Corporate Affairs and Secretary, assist in conduct of the company's economic education programs and prepare communications on public issues that are of vital interest to the company.

to the disclosure-access process, not all of them have been widely accepted. Some innovations in the video field, for instance, have not been implemented as rapidly as had been predicted.

Video does not seem likely, at present, to replace the two primary sources of corporate disclosure—in-person contact with management and written reports. Virtually none of the 402 investor-relations executives provide video discs or tapes to enable their shareholders and security analysts to view annual meetings, press conferences, or corporate interviews, even though such technology is readily available.[18] Furthermore, three-quarters of the respondents indicated that they have no plans to use such items within the next two years. Similarly, none of the corporations in this sample offers special telephone systems to enable at-home shareholders to plug into annual meetings, nor do they plan to.

Videotex systems, too, are not significantly utilized in the disclosure process, in spite of their reported low cost and ease of use.

Technological Disclosure Services

"Transforming data into information" is the way one publisher of computerized financial directories describes the service his firm provides. It is an apt description of the host of new services and products that have emerged during the past few years to exploit the "disclosure market." What the services have in common is that they provide vast amounts of information, at high speed, in compact form, and to an ever-increasing audience. Some of the services are offered by

Ownership of Equipment

Registered representatives are more likely than are security analysts or investor relations personnel to own their own personal computers and word processors.

Equipment is	Registered Representatives	Security Analysts	Investor Relations
Personally owned	58%	9%	6%
Provided by firm	53	73	87

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[18] "Audio and Video Methods to Communicate Rising," *Investor Relations Update*, March 1983, page 6.

Videotex

Videotex is not a separate technology, but a synthesis of existing technologies in the telephone, television and microcomputer fields. It is supposed to enable people with virtually no experience in computers to secure, on their home television sets, vast amounts of information and extensive graphics, as well as to interact with the screen—making bank deposits, ordering and paying for merchandise, writing letters (utilizing electronic mail), etc. Not even a keyboard is required as videotex systems provide users with a numeric keypad that looks like a channel selector. The system is also flexible, able to transmit via cable, satellite, and photonically as well as electronically. And, of course, it can connect to distant computers and data bases.

According to one expert, "The factors of low cost and ease of use have already proved to be crucial elements in the growth of the personal computer market. It will be interesting to see how these same two factors affect the growth of videotex."[1] Nevertheless, the explosion has not yet hit the investor relations departments of U.S. corporations, and has barely touched the brokerage houses of Wall Street. One possible explanation: Some experts consider videotex an interim technology, soon to be overtaken or merged into the personal computer field or the cable television industry.[2]

[1] Darby Miller, "Videotex: Science Fiction or Reality?" *Byte*, July 1983, page 56.

[2] Rich Malloy, "Commentary: Personal Computers and Videotex." *Byte*, July 1983, page 129.

traditional news organizations such as Reuters, Dow Jones, and United Press International; others by fledgling companies. Still other services are in the process of being developed by publicly held corporations, not for the market potential, but simply to improve their own access to information that they have difficulty acquiring by other means—in particular, information concerning their own shareholders.

At a recent investor-relations conference, an energy company executive distributed copies of a computer printout based on an in-house computer program that sought to discover the identities of its beneficial or actual shareholders. Utilizing its staff programmers, the company developed a software program to find out not only the institutions that owned the stock, but those that did not, the names of the institutional portfolio managers, the number of registered shares in each portfolio, and a good deal of related information. Benefits of such a program, according to the executive, included providing information to top management for use in anti-takeover fights, proxy solicitations, pinpointing speculative interest in their stock, and "general care and feeding of shareholders." However, the program was also described as "elaborate" and time consuming, and not necessarily appropriate for all corporations.

Only about ten percent of the investor-relations practitioners surveyed utilize similar programs to help them discover the names of their beneficial or actual shareholders, although three-quarters of the executives would like to have such information. One out of every five IR executives consider this type of data "very important," while over half consider it moderately important. (See box on page 17.)

Corporations that do not devise their own programs can subscribe to a number of services that provide similar information both in hard copy and electronically. Such services report a variety of characteristics about the institutions that hold a corporation's stock, as well as others that do not own it but that are worth considering, according to the subscribers' own criteria. These characteristics include geographic dispersion, how often institutions buy and sell shares ("longevity" and "volatility" indexes), and similar data. In effect, this type of disclosure service attempts to reverse the general relationship between corporations and institutional investors. Normally, those investors "acquire" corporations; with these services, corporations are in a better position to "acquire" the investors they prefer.

There are also services that broaden access to data formerly available mainly to brokers and institutional investors. Among the significant developments in this area are:

- *Up-to-the-minute stock quotes.* One service enables owners of a hand-held "digital broadcasting" device to unscramble quotes that are transmitted in garbled form over unused portions of FM radio bands. Another offers special codes to subscribers, who can then tap them out on a digital "tone" telephone, thereby "calling up" a robot that mechanically reads off the quotes—a system known as audiotex.[19]

Services such as these are provided not only by large communications firms and entrepreneurs, but by some brokerage houses as well. Early in 1983, for example, a major Wall Street firm began offering quotes on U.S. Treasury securities to owners of video screens connected to the Reuters network. The quotes were said to be previously "the exclusive domain of firms specializing in that market." A few months later, the nation's leading provider of financial electronic information offered a similar service. As noted by one financial reporter, while the availability of these data will not necessarily challenge the "three dozen securities firms and banks that dominate the Treasury market," it will affect the market by enabling small investors to shop around more prudently.[20]

- *Paperless or electronic sales of securities* offered by government agencies and brokerage houses. In early 1984, the state of Delaware announced plans to offer sales of municipal bonds electronically. This type of service demonstrates how new technology, in addition to increasing efficiency of the market, has a profound effect on the operation of the market itself. As a result of less paperwork because of electronic sales, municipal bonds are being marketed in denominations of $1,000 rather than the standard $5,000—thereby broadening the market to smaller investors. Several discount brokers, and at least one full-service broker, offer similar services for corporate securities, enabling clients to place their buy and sell orders at home.[21]

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[19] "New Services are Providing Stock Quotes." Pamela Sebastian, *Wall Street Journal,* February 27, 1984.

[20] Michael Quint, "U.S. Securities: More Quotes. "*The New York Times,* June 3, 1982.

- *Financial research news.* One firm offers videotapes of major security analysts questioning senior corporate executives. Others offer investor-relations executives a wide array of financial and economic news—news of corporate competitors, merger developments, forecasts of the money supply, the effectiveness of their own press releases, analyst opinions, and so forth.

A New York brokerage firm offers clients the option of gaining immediate access to their own accounts without bothering their brokers. They may also obtain professional research information and advice on new investments.

The following section describes the impact of major deregulatory initiatives on the disclosure-access function.

* * * *

Deregulation

Efficiency in the securities markets is dependent on a full, effective information flow. Indeed, the theory of market efficiency itself holds that the purchase price of a security will reflect all the information available for all investors to make wise decisions. Stated another way, the widely accepted theory maintains that the market price for stocks, bonds and other securities embodies "what is knowable and relevant." The more widespread the knowledge, the more efficient, or "valid," the price.[22]

What the securities market as a whole requires for efficiency, however, is not always what individual corporate issuers of those securities require. In fact, the very term "efficiency" can mean something quite different to the market than to the corporation. To the market, it implies a method of functioning in which wares are bought and sold at their most appropriate value. For the corporation, it means a manner of operating that entails the least cost for the highest production. Since the process of providing or disclosing information entails an expense, corporate efficiency often warrants less disclosure, while market efficiency depends on more. This is the crux of a dispute centering on one of the most significant recent developments in the disclosure regulations: SEC Rule 415, or shelf registration.

Shelf Registration

Originally adopted by the SEC as an experiment in March, 1982, shelf registration enables corporations to sell new issues of stocks and bonds without constantly filing information-packed registration statements, as previously required. One statement will suffice, regardless of changes in the corporation's performance that would otherwise be taken into consideration by analysts (and, perhaps, would thereby affect the price of the corporation's securities). Under the rule, a corporation may choose to take its securities "off the shelf" for sale on a continuous or delayed basis, with no advance notice, for up to two years.

Even prior to making the shelf registration rule permanent on January 1, 1984 (as amended, the rule applies only to corporations whose outstanding capital stock has a market value of $100 million or more, plus an annual trading volume of 3 million shares), the SEC provoked a storm of controversy in the financial and business press. On the one hand were the investment bankers, smaller securities firms and at least one SEC Commissioner, who warned that the investment bankers who buy and resell the securities would not have time to examine a company's records and operations diligently—as is required under accepted interpretations of the Securities Act—prior to offering the securities for resale.[23]

Information about the corporate issuer which is already publicly available—such as is contained in 10Q reports—is not much help, they argued, because the data are often several weeks, or even months, old. They warned, too, that the absence of sufficient time to review relevant information, and put together a comprehensive distribution or underwriting syndicate, would make purchases more risky. The initial investment banker would seek to unload large blocks of the securities very quickly, and the only ones able to afford the larger blocks would be the institutional investors and giant brokers, thus squeezing out smaller brokerage firms and individual investors. While competition would initially increase because the brokers in the traditional underwriting syndicates would no longer be assured of their business, ultimately, market concentration would be the norm.

On the other hand were the corporations, particularly the firms' chief financial officers, pleased with the prospect of saving money on printing costs and labor; of enjoying greater issuing flexibility since they can choose either to use the rule or not as warranted by their evaluation of market conditions; and of having the "ability to pick and choose among a plethora of new financing ideas and techniques that have been largely inspired by the ferocious bidding among underwriters for 415 business."[24] As two financial consultants indicated in a *Wall Street Journal* column, prior to the adoption of shelf registration, a corporation's decision to raise equity capital was a burdensome, time-consuming process. The fixed costs of issuing equities often led management to design large, difficult-to-market issues. As a result, efficiency in financial planning was made more difficult.[25]

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[21] Karen Slater, "Buying Stocks at Home." *Wall Street Journal,* March 19, 1984.

[22] Charles D. Kuehner, CFA, "Efficient Markets and Random Walk." in Sumner N. Levine (ed), *Financial Analysts Handbook.* Homewood, Ill: Dow Jones—Irwin, Inc., Vol. 1, 1975, page 1226.

[23] Sec. 11(a)(5), The Securities Act of 1933.

Such, at least, were the arguments as presented in the media. Now that the rule has been in effect for two years, how do the corporations and the security analysts line up?

According to the survey, fewer than one-third of the companies polled have made use of the shelf-registration rule, with the same number predicting that they would "sometimes" use it in the future. (Almost all of the surveyed firms are large corporations, and thus eligible to raise capital under both the initial and the amended rule.) More said they would never or rarely use it than said they would always use it; and almost half (44 percent) remained undecided about its usefulness.

Some of the comments from the analysts were angry. "We have to dig deeper and longer," one wrote. "Reducing required information is ridiculous and devastating." Others mirrored this view. "It just makes it harder to get the data," and "it eliminates a source of timely information on current operating results," were two typical comments. Referring to Rule 415 and related deregulatory developments, one analyst noted: "The prospectus was a great single-source document for information on a company. Now nearly everything in it is incorporated by reference to other documents."[26]

In spite of these sentiments, only about a quarter of the surveyed analysts felt that the rule actually hindered them in their work. More than a half (56 percent) said shelf registration had no effect—in some cases, because the analysts did not follow companies that used it, but more often because, faced with a decrease in one source of information, the analysts were forced to obtain what they needed elsewhere.

Asked to elaborate on his view of the effect of Rule 415, one analyst commented that the market "may show sluggishness" in terms of efficiency, and that "it will take the analyst longer to get the information." Ultimately, however, "analysts will make up for it by working harder." This was typical of the responses: The needed information will be found, somehow.

In one sense, this conviction may be a result of professional self-esteem, reinforcing the very high proportion of respondents who feel that the analyst's function will remain central to the proper operation of the securities markets, regardless of changes in legislation or in new technology.

Other Deregulatory Issues

While shelf registration represents the most significant reduction in recent disclosure requirements, other regulations contribute to the trend. As of December 31, 1983, for example, corporations have been allowed to decrease the amount of information they disclose concerning executive compensation in proxy statements. Previous rulings have allowed them to curtail information on subsidiary companies, and on PPE (property, plant and equipment). Again, while the corporations tend to approve the overall trend towards less disclosure—and the analysts tend to disapprove that trend—nearly two-thirds of the respondents in both groups indicate that these new deregulatory issues will *not* affect them in the performance of their basic jobs. Where there was disagreement was in the remaining third of each profession: The remaining IR respondents felt the new rules would help them; most of the remaining analysts said they would be hindered.

Initial reactions to the controversy over Rule 415 and related issues were, paradoxically, reminiscent of reactions to the very establishment of the SEC in the early 1930's. At the time, proposals for a monitoring and disclosure agency were greeted with cheers and howls, and dire predictions: "The Act is drastically deflationary in nature and may seriously retard economic recovery," wrote Arthur Dean, an attorney and forceful critic of the proposal. "It may result in unemployment because corporations may be forced to make drastic economies and to suspend the payment of dividends in order to obtain the necessary working capital. . . .It will be difficult to obtain money for new and speculative enterprises. . . .Only the largest houses which have competent statistical staffs capable of making the investigation required by the Act can afford to be underwriters. . . Independent directors will be chary about sitting on boards of directors and exposing themselves to the liability imposed by the Act. . . .It may force American corporations to go abroad for capital. . . .The number of 'strike suits,' that is suits brought for the purpose of legal blackmail, will be greatly increased. . . .With the purposes of the Act, i.e. the protection of the public against fraudulent securities, the writer is in full sympathy, but it seems hardly necessary to burn down the house to exterminate vermin."[27]

Establishment of the SEC neither set ablaze nor reduced to cinders the securities markets, although some investment

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[24] Beth McGoldrick, "Life With Rule 415," *Institutional Investor*. February 1983, page 129. See also: Tim Carrington, "SEC Shelf Rule Proves a Boon to Big Brokers." *Wall Street Journal*, October 18, 1983; "Stock Issuers Warm up to Shelf Registration." *Business Week*, September 5, 1983, page 82; "Securities: SEC Agrees to Restrict Use of Shelf Registration Rule to Largest Companies." *Daily Executive Review*, November 10, 1983, page A[illegible].

[25] Bluford H. Putnam and G. Bennett Steward, "Investment Banking's Changing Face." *Wall Street Journal*, January 4, 1984.

[26] Under the integrated disclosure system, the SEC adopted new registration forms, effective May 24, 1982, that allow most corporations to eliminate documents formerly required, and simply refer to those documents. For a summary discussion of the regulations, see John S. Gillis, "Integrated Disclosure System." *Financial Analysts Journal*, May-June 1982, pp. 18-20, 79.

[27] Arthur Dean, "The Federal Securities Act: I" *Fortune*, August 1933, p. 106.

Not Enough Information—or Too Much?

Asked what type of information they want that they are not now receiving in sufficient amounts from corporations, over a quarter of the security analysts mentioned line or segment data, such as profits and sales figures on subsidiaries, product groups or lines. The percentage might actually be higher, as the other two types of responses were along the lines of "better quality of data" and "more data in general."

By contrast, here is how one of the corporations surveyed instructs its investor-relations director to deal with this same issue, as stipulated in an internal policy memo: "In general, all information concerning individual company profits, contract profits and rates, and financial forecasts data shall not be disclosed."

bankers refused to buy or sell securities under the new laws. More lastingly, the SEC altered significantly the way corporate issuers, investors and brokers interacted in the marketplace.

In the next few years, when the furor over Rule 415 dies down, there is likely to be a further alteration in this interaction, resulting in: more convenience to large corporations in their efforts to raise capital (a majority of analysts and IR practitioners questioned are convinced of this); added inconvenience to many security analysts who will be forced to search out from other sources the information they need; and furtherance of the trend toward market concentration in the hands of large brokers and institutions, with the consequent decline in activity of individual investors and smaller brokers.

Shareholder Communications

Shelf registration pertains to disclosure *by* corporations *to* the investment community. Because it limits such disclosure, it tends to be favored by the former and generally opposed by the latter. Conversely, as expected, legislation that requires the release of more such information is usually favored by investment or financial analysts and opposed by the corporations. Where disclosure flows in the opposite direction—from the investment community back to the corporation—positions are, understandably, reversed. Initiatives requiring the release of data concerning shareholders are strongly supported by the corporations, who argue that they should, as a matter of right, know the names of their true investors, rather than simply the name of the broker, bank or institution that conducted the investment transaction.

But many in the investment community take a dim view of having to disclose such information. The Securities Industry Association (SIA), a trade group representing over 500 securities firms in the United States and Canada, strongly opposed an impending SEC rule designed to facilitate communication between shareholders and corporations. The rule will require, as of January 1, 1985, the release of names held by the securities firms.[28] Implementing the rule, according to the SIA, would be a bad idea because: Costs would be too high for the broker-dealers; brokers already "forward timely proxy materials and annual reports to beneficial shareholders"; commercial bankers—who are increasingly emerging as competitors to brokers and investment bankers, but who are not governed by the SEC—will not be affected by such disclosure requirements, so that implementation of the rule will be unfair; and shareholders value their anonymity: Even if they consent to receive stipulated information from corporations, what guarantee is there that corporations will not "misuse" the privilege?[29]

Concern over the communication problems between corporations and their shareholders goes back to the early 1970's, as an increasing number of securities were being registered in the name of institutions, banks, broker-dealers, and other "nominees" rather than in the names of the people who actually purchased them. One difficulty of this development pertained to the distribution of proxy materials; since the actual security owners (known as beneficial shareholders) could not be reached, they could not receive proxy materials and, it was claimed, thus could not intelligently inform their brokers or other representatives how to cast their proxy votes at shareholder meetings. Various rules were adopted during the decade by the SEC to address this issue. One, for example, required that corporations consult with the intermediaries to determine how many packages of proxy materials were needed to be redistributed to the actual shareholders.[30] Another instructed broker-dealers to actually forward those materials in a timely manner.[31]

But the trends that caused the problem in the first place continued, namely, the growth of institutional investors; the brokerage practice of registering their clients' securities under a single "street" or "nominee" name (over half of the representatives surveyed use street name registration, mostly for reasons of convenience); and the establishment of depositories in which not only brokers but banks and other institutions register all their accounts in what has come to be called "piggy-backing." Thus, not only cannot corporations discover who their beneficial shareholders are, they often cannot discover who many of the nominee intermediaries are: Individuals are recorded with brokers, bankers and institutions; the latter two are recorded with money-center banks or depositories; they, in turn, are recorded with major depositories.

The practice of nominee registration and the use of depositories grew rapidly during the 1970's, and shows no sign of abating. By the start of 1984, broker-dealers alone registered over 18 billion shares with the Depository Trust

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[28] Section 240. 14b-1, Securities Exchange Act of 1934.

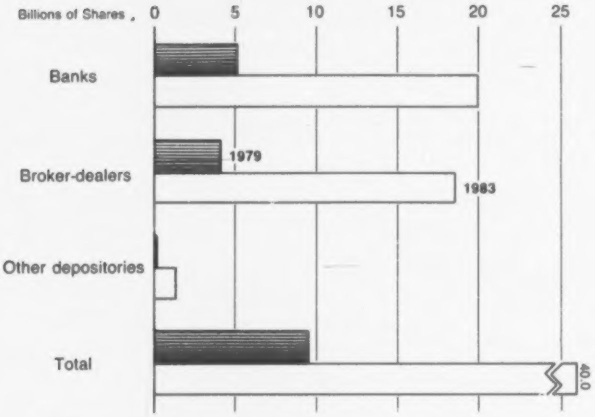
[29] See testimony of Securities Industry Association, March 9, 1983, re SEC file No. S7-954: "Facilitating Shareholder Communication."

[30] SEC Release No. 34-11079 (October 31, 1974) [39 FR 40766]

[31] SEC Release No. 34-13719 (July 5, 1977) [42 FR 35953]

Chart 2: Number of Shares Registered with the Depository Trust Company, 1979-1983

(from all sources)



Note: The total value of all shares on deposit by the ~~end of~~ 1983 was over 1.2 trillion dollars.

Source: The Depository Trust Company, various newsletters.

Company in New York City. That figure represents more than a *four-fold* increase over the shares represented just four years previous. Banks and other depositories also enormously increased their registration with the DTC, so that the full amount of shares on record in that one institution was $1.2 trillion. (See Chart 2.) If all the nation's investors were eventually so registered, all U.S. corporations would have, as of record, only a handful of shareholders.

In 1981, the SEC established an advisory committee to address the issue of corporate-shareholder communication; a report summarizing the recommendations was released in June, 1982.[32] As is its practice, the Commission then published proposed rules, and solicited comments prior to adopting final rules. According to the SEC, "Issuer commentators [i.e., corporations] who addressed the direct communication proposals almost unanimously favored their adoption in one form or another. Almost all banking and securities industry commentators, however, were opposed to these proposals."[33]

The most significant rule change would enable corporations to cut through most of the layers of intermediaries separating them from their shareholders. It requires, as of January 1, 1985, that upon request—and upon assurance of reimbursement of expenses—brokers and dealers provide a corporation with a list of all the company's shareholders: their names, addresses and securities positions. Only those shareholders who formally object to having their names so disclosed will remain unidentified. Even then, brokers will be required to have available, in their records, an assertion that the shareholder actually refused to have his or her name released to the corporation.

Asked how they felt the new disclosure rule will affect them, almost two out of five representatives indicated that the rule was of no importance, that it would have no effect on their work. A third of the respondents were "not sure" what effect the rule would have, while only one in seven felt this added obligation would hinder them on the job. In other words, in spite of the almost universal official opposition within the financial community when the rule was proposed, a major segment of the respondents from that community, in fact, seems little concerned or unsure: Either they feel the rule will have no appreciable impact on their work—perhaps because of the ease with which mailing lists can be compiled and printed by computers—or they are not sure what the impact will be.

The reactions from the corporations were anything but ambivalent. Three-quarters of the investor-relations executives surveyed said they would, indeed, take advantage of the rule; of the quarter of respondents who said their companies would not avail themselves of the opportunity, one explanation offered was that enough shares are represented on the firm's existing board of directors to consititute a quorum, obviating any pressing need to contact all other individual shareholders. "Dissatisfaction out there among the shareholders who are not on our board doesn't really mean all that much to us in terms of securing a majority," said one IR respondent. "That may change over time, but right now we are over half-owned by a few individuals on the board."

Beneficial Shareholders: Management's Need to Know

The increasing use of street name registration, the growth of institutional investors, and the establishment of central depositories effectively hides the identities of beneficial, or actual, shareholders from corporate management. Investor-relations executives seek to know those identities for the following reasons:

Reason	Percent
Good management practice, in general	34%
Improves shareholder allegiance to present management through improved communications	19
Important to assess investment objectives of shareholders	11
Keeps corporation informed of potential takeover activity	10
Keeps company abreast of speculative interest in their stock	6

Beyond knowing the names and addresses of beneficial shareholders, investor relations officials would like to know how long stocks are held, the specific investment objectives of the shareholders, the names of decision makers within institutional investors, and a profile of the shareholders.

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[32] Advisory Committee on Shareholder Communications, *Improving Communications Between Issuers and Beneficial Owners of Nominee Held Securities*. Washington, D.C.: U.S. Securities. and Exchange Commission, June 1982.

[33] SEC, "Facilitating Shareholder Communications Provisions." 17 CFR Part 240, (SEC Release Nos. 34-20021; 40-13408; SEC File No. S7-954) [48 Federal Register 35082]

Proxy Dissemination

Other changes adopted by the Securities and Exchange Commission, effective November, 1983, tightened, but did not alter, the proxy material distribution system earlier in effect. Issuers, for example, have to inquire of brokers and other intermediaries how many packets of proxy material are required 20 days in advance of the record date of the shareholders' meeting, instead of the previous 10 days. Also, broker-dealers have to respond to such an inquiry within seven business days of receiving the question, instead of merely "promptly" as earlier required. And they have to mail out the materials no later than five days after receiving it from the issuing corporations.

While most of the corporations surveyed will take advantage of the direct communication rule, only two-fifths feel that the related proxy rules will actually improve the proxy-dissemination process. Half of them assume it will have no effect. "It remains to be seen" and "It should improve it, but probably won't" were common skeptical responses, reflecting, perhaps, previous experience.

Respondents were also asked what additional methods, if any, would improve the proxy-solicitation process. Among the responses were: that brokers be required to mail the proxy materials even sooner—in three days instead of the newly mandated five; that they should be required, even without being asked, to automatically supply shareholder lists to the issuers; that the entire nominee-registration system should be eliminated; and that corporations should be allowed to mail proxy materials directly to the beneficial shareholders, rather than to the broker or other nominee.

Concerning this last suggestion, the SEC has issued no restriction on corporations mailing such materials to the shareholders, once the list is made available after January 1, 1985. In an interview, a staff attorney at the SEC informed The Conference Board, however, that corporations will still be required to use the existing distribution process: They will have to continue mailing materials to brokers and nominees. Any additional proxy mailings corporations desire to make are permissible, if they are willing to undertake the added printing and mailing cost.

Banks, Brokers and the SEC

The most frequent recommendation of the corporate IR respondents on improving the proxy process was that banks, as well as brokers, should be brought under the purview of the new rule. This suggestion goes to the heart of a long dispute involving the SEC, the various bank-regulatory bodies, and spokespersons for banks and brokers. At present, commercial banks are specifically excluded from the jurisdiction of the SEC because their business had been, until recently, very distinct from that of broker-dealers and investment bankers. Commercial banks advanced credit, while brokers sold securities—two functions specifically separated by the Banking Act of 1933, commonly referred to as Glass-Steagall after its sponsors.

Brokers' Views on Banks

When registered representatives were asked how they felt about "the fact that banks and S&L's are entering the securities brokerage business," the responses were: Concerned—60 percent; unconcerned—30 percent; and the remainder had no firm opinion.

"Congress believed that banks should be concerned primarily with commercial loans and the safety of deposits, so it clearly forbade them to engage in the securities business because of the risks and inherent conflicts," according to the chairman of the Securities Industry Association and a strong opponent of policies to permit brokerage activities among commercial banks. "In return, banks were given special privileges including Federal deposit insurance, a roughly 40 percent tax advantage over other businesses, favorable accounting rules and protected markets."[34]

But the separation of functions adhered to during the half century since passage of Glass-Steagall and the Securities Exchange Acts has been diluted considerably during the past two years. Deregulation of the multifaceted financial industry has led many to predict that most distinctions among banks, brokers, insurance companies, and other financial firms will blur to the point where only one type of institution will emerge: the financial services firm. In any event, the agencies that presently retain jurisdiction over commercial and savings banks and savings and loan associations have been supporting the right of those firms to engage in brokerage activities.

In August, 1983, the Federal Reserve Board allowed bank holding companies to offer their own brokerage activities, as well as to acquire discount brokerage services.[35] A few months prior to that decision, the Federal Deposit Insurance Corporation approved the same right for banks under its jurisdiction: "It is the opinion of the Legal Division of the FDIC, after reviewing the language of the statute, current case law interpreting the Glass-Steagall Act, and the Act's legislative history, that 'discount brokerage' is a permissible activity. . . .By the term discount brokerage we are referring to the practice by a bank of executing securities transactions solely at the direction of a bank customer but not providing that customer with any investment advice."[36]

Notwithstanding heated attacks on these deregulatory policies—a spokesperson for mutual fund firms characterized the FDIC position as a form of "statutory book burn-

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[34] Robert E. Linton, "Banks, Brokers, Thrifts." *The New York Times*, August 18, 1983.

[35] Kenneth B. Noble, "Feds to Let Banks Serve as Discount Brokers." *The New York Times*, August 11, 1983.

[36] "General Counsel's Opinion No. 6—The Legality of Discount Brokerage Services When Offered by Insured Nonmember Banks." FDIC, in "Notices," *Federal Register*, Vol. 48, No. 100, May 23, 1983.

Full-Service Brokers, Discount Brokers. . .and In-Between?

Federal bank-regulatory agencies have ruled that commercial and savings banks may offer brokerage services so long as they remain discount brokers (that is, merely conduct buy-and-sell orders for customers). Full-brokerage services, which include investment opinions, are not yet considered acceptable by the agencies. But one brokerage service seems to have created a new niche for itself: somewhere in between the full service and discount areas. In its promotional material to banks, the firm defines itself as "a new, independent investment service. . .a registered broker/dealer, designed for S&L's, savings banks, and their customers. . .[The company] offers portfolio evaluations and recommendations, investment strategy planning and research services. . .Although [our] commission rates are competitively priced and lower than most national and regional brokerage houses, [the company] is not a discount broker. . .[our] registered representatives are required to eliminate their own opinions from the advice they offer customers."

Banks and Proxy Materials

Commercial and savings banks maintain that there is no need for them to be regulated by the SEC's proxy-dissemination rules, in part because they already distribute the required material to their clients, the beneficial shareholders. This position is seconded by the SEC's Advisory Committee on Shareholder Communications. "No federal or state regulation prescribes the procedures for bank nominees to follow," the Committee wrote. "Nevertheless, many banks adhere to procedures similar to those followed by brokerage firms." But not all banks. The committee continued: "Some banks have assumed, rightly or wrongly, that beneficial owners as a group are insufficiently interested in the affairs of the corporations in which they invest to warrant forwarding the proxy material to them. While this institutional attitude may be changing, it still persists to some degree, particularly among smaller banks."

—*Improving Communications*
Between Issuers and Beneficial
Owners of Nominee Held Securities.
U.S. Securities and Exchange
Commission, June, 1982, pp. 15, 18.

ing''[37]—commercial and savings banks have moved rapidly into the securities markets, leading to predictions that they will "dominate the discount brokerage business by the end of the decade."[38]

The more banks become brokers, the more the SEC has called for jurisdiction over them, specifically requesting that they adhere to the proxy-distribution procedures required of other brokers.[39] Representatives of the commercial banking industry oppose SEC jurisdiction.[40] On the other hand, the Commission's position is supported by issuing corporations, as reflected in this survey. "Force *banks* to disclose beneficial holders identity," said one IR respondent, representing the attitude of many. And another recommended development of "computer programs for maintaining the information received from the broker, bank or nominee."

13-F: Institutional Disclosure

Just as the IR respondents favor SEC jurisdiction over banks that enter the securities trading business, so they would like to see the SEC strengthen its jurisdiction in the area of institutional disclosure. At present, institutional investors that control accounts totaling over $100 million in equity securities have to disclose specified data about the nature of those accounts to the SEC. The SEC, in turn, makes the information public. Required quarterly reports stipulate the name of the corporate issuer of the securities in each account, the classes and identification (or CUSIP) number of those securities, the market value of each class, the total number or principal amount of each class, and the name of the manager within the institution who exercises investment discretion or voting authority. The provision calling for this type of disclosure, known as Rule 13-F, was adopted in July, 1978, a full decade after Congress authorized the SEC to study what effect the growing number of institutional investors were having on the securities markets.

Two matters of concern to corporations over the 13-F filings are: (1) the fact that institutions holding under $100 million in securities need not file the reports; and (2) the alleged ease with which even those institutions filing 13-F reports are granted "confidentiality" status under the Freedom of Information Act. Such status results in withholding the information from public scrutiny.

Banks and Shareholder Communication

While brokers and investment bankers may not welcome the entry of commercial and savings banks into the securities-trading business, investor-relations personnel have mixed views. Such entry has not affected, either positively or negatively, the ability of 44 percent of the corporations in this study to communicate with their beneficial shareholders. Another 38 percent said they were not sure to what extent, if any, communication was affected. The remaining respondents said communication has been made more difficult.

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[37] "Securities: Mutual Fund Chief Urges SEC to Simplify Fund Disclosure Process." *Daily Report for Executives,* May 18, 1983, page A-1.

[38] "Banking: Bank Domination in Discount Brokerage Business Predicted by 1990." *Daily Report for Executives,* April 1, 1983, page A-22.

[39] Bruce Ingersoll, "SEC Seeks to Extend Rules on Handling of Proxy Materials to Banks and Thrifts." *Wall Street Journal,* April 13, 1984; Richard L. Hudson, "SEC Considers Regulating Banks, Thrifts That are Entering Stock Broker Business." *Wall Street Journal,* October 20, 1983.

[40] "Securities: ABA Opposes SEC Proposal to Make Banks Register as Brokers." *Daily Report for Executives,* January 12, 1984, page A-2.

Exhibit 3: How Banks Inform Shareholders on Proxy Matters

As of this writing, banks are not required to follow the proxy-dissemination procedures adhered to by brokers and dealers. Nevertheless, many banks do follow those procedures, and have taken steps to strengthen the proxy process. The following is a page from a pamphlet distributed by banks to their customers on the nature of proxy voting. The pamphlet was prepared by Manufacturers-Hanover Trust Division, American Bankers Association Trust Division, American Society of Corporate Secretaries, Inc., Corporate Transfer Agents Association, Inc., The Securities Industry Association, The Securities Transfer Association of New York, Inc., and The Stock Transfer Association, Inc.

* * * *

What Every Shareholder Should Know

Proxy voting is one of your important rights as a corporate shareholder and a vital part of communication between you and the company in which you hold shares. Today, an increasing number of securities owned by individuals are officially registered in the name of a bank or broker and held by them, as nominee, on behalf of the shareholder. This practice, as we will further explain, is efficient when you wish to buy or sell securities through your bank or broker. But it does add a "middle man" to the communication process when your company seeks your vote, by proxy, through the mail.

In this booklet we've asked some typical questions about the whats and whys of stock registration and the proxy voting process, and provided answers every shareholder should know about proxy rights.

If we've missed any questions which interest you, please contact your account officer.

Concerning the first matter, half the IR respondents would like to see the SEC require securities disclosure by *all* institutional investors, regardless of the size of their portfolios. (A third did not take a position, and the remainder said "no" to the question.)

Concerning the second issue, confidentiality, many IR practitioners allege that "confidentiality" status is too readily granted. In fact, according to one respondent who made his views known at a recent investor-relations conference, all an institution need do is assert that release of the information would cause "substantial harm" to its competitive position vis-a-vis other institutions. The SEC, he maintained, would not undertake the required investigation to ascertain the validity of the claim unless it received an explicit third-party request to do so.

To test how widespread was the feeling over alleged "lax regulation" in this area, IR respondents were asked whether, in their opinion the SEC adequately enforces Rule 13-F.[41] One in three of the 402 IR respondents shared the "lax regulation" view. This may reflect the current trend within the SEC toward less required disclosure in general—regardless of who has to do the disclosing.

Summary

One effect of the enormous technological innovations of the recent past has been to transform information itself from a flow of data and ideas into an economic sector in its own right. Disclosure of, and access to, this information, therefore, has emerged as a central activity within the corporate and financial worlds. The personnel responsible for

Analysts on the SEC

Security analysts were asked what changes in SEC procedures and policies they would welcome. The following is a summary of their responses.

(1) Require additional corporate disclosure of segmental and subsidiary operations.

(2) Require additional disclosure on public and private debt and preferred stock issues.

(3) Increase focus on insider trading. Require more timely insider-trading reports.

(4) Require all information in 10K reports to be incorporated into annual shareholder reports.

(5) Require greater detail in the "Management Discussion and Analysis" (MDA) sections of annual reports. Additional emphasis in the MDA section should be placed on explanations of events—the reasons for specific corporate developments.

(6) Improve surveillance of the options markets, paying special attention to transactions just prior to the expiration dates of major options.

(7) Make use of security analysts as consultants to screen financial documents like 10K's and annuals for obvious shortcomings.

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[41] For news stories on the issue of "lax regulation" at the SEC, see: Richard L. Hudson, "SEC's Enforcer Runs Tight Ship, but Critics Charge He's Too Soft." *Wall Street Journal,* June 28, 1983; Kenneth R. Noble, "Record of SEC Chief Draws Mix of Opinions." *The New York Times,* November 7, 1983; Monica Langley, "As Stocks Climb, Short-Staffed SEC Tries to Cope With Flood of Securities Offerings." *Wall Street Journal,* July 25, 1983; Monica Langley, "Court Rulings Against SEC Freeze Agency's West Coast Investigations." *Wall Street Journal,* September 22, 1983.

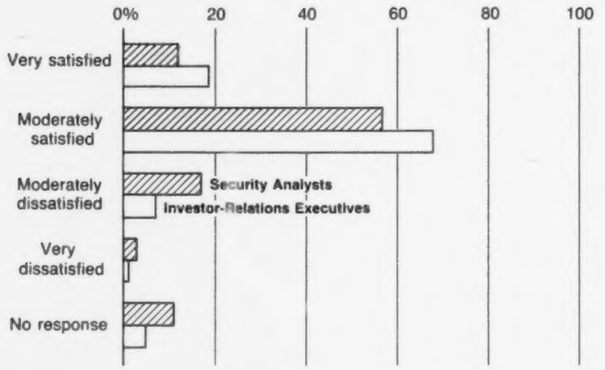

Chart 3: Views on the SEC

In general, investor-relations executives are more satisfied with the way the SEC enforces its disclosure laws than are security analysts.

this function—investor-relations executives in corporations, security analysts, and registered representatives in financial firms—now have at their disposal the equipment, primarily computers and word processors, and the services necessary to exploit and further develop this activity to a vast degree.

At least within the financial community, initial fears have been laid to rest that the new equipment available to the public would render the brokers and analysts expendable. Those fears are replaced with a growing conviction among investment advisers that their positions are more valuable than ever, as are the positions of their corporate counterparts, the investor-relations executives.

At the same time that technology is improving access to, and use of, information, current deregulatory policies tend to restrict the data flow: Often less disclosure is required precisely as more and more information is demanded. Responses to deregulatory trends usually mirror the particular interest of the various participants: corporations, for example, generally applaud fewer governmental requirements to disclose data to the financial world. But they take a dim view of any relaxation of rules that grant them access to certain financial data—in particular information concerning the identities of their own shareholders.

Deregulation is not limited to disclosure. Current federal policies allow banks and brokers, for the past 50 years two separate and distinct types of financial organization, to enter each other's realms. Deregulatory policies also allow for an ever-increasing proliferation of types of securities (such as index options), introducing further complications into the financial world, and making access to information even more crucial.

In sum, both the deregulatory trends and the new technological developments are rendering the jobs of investor-relations executives, security analysts, and registered representatives, at once more complex and easier. More complex because of the greater amount of information and sharper skills needed to comprehend and translate the bewildering, rapidly changing realities; and easier, because the resources to undertake that very function are more sophisticated than was imaginable only a few years ago.

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Research Bulletin

Managing Capital Investments

by Patrick J. Davey

The Conference Board

number 165

Introduction

It is not an easy job to invest funds here and now in the expectation of realizing adequate returns on them in subsequent years. But it is one that financial and other corporate executives have long performed in administering their firms' capital-expenditure programs.

To assist management in coping with the critical responsibility of reviewing and approving capital outlays, The Conference Board has conducted a succession of studies over the last thirty years.[1] This, the fourth in the sequence, examines the current corporate response to a task made increasingly difficult in recent years by the emergence of volatile interest and high inflation rates. The report updates earlier findings on practices, especially those having to do with appraising proposals and fixing dollar limits of expenditure authority. It also gives special consideration to the vital underpinnings of capital-investment decision making: costs of capital and hurdle rates.

The responses of 125 corporate officials to a questionnaire provided much of the information for this study. Table 1 on page 3 groups responding companies according to type and size of capital budget. Other input came from interviews and discussions with knowledgeable financial executives.

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[1] Now out of print, predecessor Conference Board studies include: John H. Watson, III, *Controlling Capital Expenditures*, Studies in Business Policy, No. 62, 1953; Norman E. Pflomm, *Managing Capital Expenditures*, Studies in Business Policy, No. 107, 1963; and Patrick J. Davey, *Capital Investments: Appraisals and Limits*, Report No. 641, 1974.

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Table 1: Surveyed Companies by Size of Annual Capital-Expenditure Budget

Capital-Expenditure Budget Range (millions of dollars)	Manufacturing Companies	Nonmanufacturing Companies	Total Companies
4 - 99	32	7	39
100 - 499	48	16	64
500 and higher	15	7	22
	95	30	125

Assembling Capital Budgets

Financial theory recommends that corporations accept investment proposals whose projected costs are less than their anticipated returns up to the point that available funds are exhausted. And, by and large, this is the path that most companies follow in planning capital expenditures.

Among those queried, the bottom-up approach to capital budgeting predominates. In all save a few participating companies, investment proposals originate within operating units and, subject to the winnowing process, wend their way up the ladder to ultimate approval or disapproval at the corporate level.

In the exceptional cases, a partial or complete top-down approach is taken to capital budgeting. Under such a system, corporate management imparts greater direction—often in the form of constraints on budget size or content—at the outset of the budgeting cycle.

Here are some representative descriptions of the budget-assembly process provided by respondents:

"For the majority of capital budget items the following procedure is used. First, the operating divisions submit ranked lists of desired capital projects. These proposed projects are evaluated by corporate staff officers who select those projects that are consistent with corporate priorities, the strategic plan, financial constraints, and the divisions' own priorities. Recommendations are given to the Vice President and Senior Vice President-Operations for review and revision. Approved proposals are returned to the divisions for preparation of formal authorizations for expenditure (AFE's) which include detailed costs and justifications. These are then submitted to the corporate Cost and Economic Analysis staff for review and calculation of return on investment. The AFE's then go to the Senior Vice President-Operations for approval. The final step is incorporation into the overall capital budget for submittal to the board of directors for final approval."

Senior Vice President-Finance & Accounting
Transportation Company

"The budget is assembled using a top-down bottom-up process. The corporation provides each operating division with net income, cash flow, and capital spending guidelines to use in developing its budget. A set of macro-economic business-activity-level assumptions is provided as well. Each of the divisions then prepares its own budget and submits it to corporate headquarters. At headquarters, the budgets are consolidated and reviewed with the company's management group. The management group then either recommends the consolidated budget to the board of directors for approval, or requests that additional refinements be done at the corporate or divisional level."

Manager-Business Analysis
Petroleum Company

Influence of Strategic Planning

Strategic planning, or the setting of long-range objectives for performance and business positioning, is an established practice among most participating companies. It also plays a role in many of them in resource allocation. However, the relationship between the planning and allocating processes differs among responding companies. In a large number it is close, with strict attention paid to long-range goals in the selection of projects. In others, however, the affinity is less pronounced, often because financing considerations or industry conditions sharply limit investment options.

Where accomplished, strategic planning usually serves as the foundation for operating budgets as well as capital budgets. The duration of the strategic plan—perhaps three, five or ten years—often coincides with the term of the capital budget. In such cases, segments of the plan may be implemented annually with changes or additions to it made if required. The following comment by the senior vice president-finance of a machinery company explains how strategic planning influences the size and makeup of the organization's capital budget:

"While planning is a continual process, officially the planning cycle begins with the submissions by the divisions of the long-range (five-year) strategic plans to corporate on May 1. During May, each division president makes an oral presentation of the long-range strategic plan to the entire planning committee. Part of this presentation is devoted to a discussion of the total capital needs and specific major capital expenditures (over $250 thousand) that are required to support the long-range objectives. At the end of May, the planning committee meets to discuss the major long-term issues that were raised by the long-range strategic planning process and provides guidelines to divisions, including the range of capital spending which is to be incorporated in to next year's annual capital-expenditure budget.

"Then, on July 1, the divisions submit detailed capital expenditure budgets to corporate. Concurrently, each division president sends a brief letter to the corporate president explaining any significant changes in the annual capital-expenditure budget from the proposed capital spending for the coming year in the long-range strategic plan. The detailed capital expenditure budgets are carefully reviewed and screened by the corporate president and group vice president. The detailed capital budgets are either approved as submitted or revised as appropriate. The divisions are notified and requested to incorporate these capital budgets for planning purposes into the annual operating plan due at headquarters on October 1. Finally, on December 1, the divisions' annual operating plans, including the capital-expenditure budgets, are presented to the board of directors for approval. Final budget approval means the corporation has accepted, in principle, the proposed capital expenditure budget but it does not mean authority to commit funds without appropriation approval."

Just how effective is long-range planning in the shaping of capital expenditures? Respondents to an earlier study expressed the opinion that its impact could be increased if corporate practices focused more on the funding of strategies than on the funding of individual projects.[2] And recently an academician with consulting and research experience in capital budgeting suggested a novel way of bolstering the role of strategic planning in capital budgeting. (See accompanying box.)

Cost of Capital and Hurdle Rates

For many companies, cost of capital and hurdle rates are at the heart of the capital-investment process. To maximize shareholder values, profit-oriented corporations strive to obtain investment returns in excess of capital costs. Despite these efforts, the reverse sometimes occurs. When it does, shareholders' values are impaired and management tenures may be threatened. To ward off such undesirable developments companies often set minimum hurdle or cutoff rates for capital expenditure proposals that equal or exceed the costs of capital.

Considering Strategic Opportunities

In his article, "Today's Options for Tomorrow's Growth," appearing in the March-April 1984 issue of the *Harvard Business Review*, W. Carl Kester cites the difficulties often encountered in securing approval for capital-investment proposals because of differing attitudes among project reviewers. Strategists, on the one hand, tend to look at what undertakings might accomplish, while financial analysts, on the other, are inclined to focus on costs and projected returns.

To reconcile these sometimes divergent positions, Professor Kester suggests that decision makers add a new tool to their analytical arsenals by thinking of strategic investment opportunities as options on the future expansion of their companies. Pointing out that growth options, like call options on securities, have value, he provides a rationale for the posture and provides a guideline for its applications.

Use of the growth-option approach to investment analysis can prompt unconventional decisions. For example, proposals that might ordinarily be rejected on straight financial grounds may be deemed acceptable because of their strategic value.

Cost of Capital

Corporate capital is generally said to consist of a company's long-term debt and net worth. Other items appearing on the right hand side of the balance sheet are usually excluded from consideration either because they are "free" (trade credit) or transitory (commercial paper).

Costs of capital—usually stated in percentages representing rates paid for permanent capital—vary considerably, even among companies in the same industry. For one thing, the mix of funding instruments is seldom identical. For another, the market's assessment of securities covers a fairly wide range and price disparities produce differences in costs.

A 1981 study of five industry groups found that the one with the greatest amount of leverage—debt in its capital structure—had the lowest cost of capital.[3] But this determination did not serve as a beacon for others, nor did it come as a surprise. It related to the utility industry where, at least until recently, investors tended to be more tolerant of high debt ratios because of the greater certainty of cash flows.

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[2] Rochelle O'Connor, *Resource Allocation and Strategic Planning*, The Conference Board, Information Bulletin No. 99, 1981.

[3] Patrick J. Davey, *Corporate Capital Structures and Financing Plans: 1981-1984*, The Conference Board, Information Bulletin No. 97, 1981.

While a close comparison of capital costs on an industry basis between 1981 and the present is not possible because of sampling differences, an overall review of interim developments is. Then, the capital costs of 167 surveyed companies ranged from about 4 percent to more than 25 percent. The median cost of capital reported in 1981 was 13.5 percent; the most frequently mentioned figure was 15 percent.

In the fourth quarter of 1983, the cost of capital in 104 companies reporting that figure extended from 8 percent to 20 percent. (Percentages outside this range reported by five companies—5, 12.5, 30, 30, 36—were excluded for consistency because they were classed as either real, inflation-adjusted, or pre-tax.) The median and the mode are the same as three years earlier—13.5 percent and 15 percent, respectively.

Not all companies view the cost of capital as the cornerstone of capital expenditure policy. A handful of respondents, for example, maintain that this calculation either presents formidable obstacles or is too uncertain to produce a reliable standard on which to base hurdle rates.

Determination of Capital Costs

The bulk of participants develop an after-tax, weighted average of capital components to calculate costs. Thus, for example, they compute the effective cost of long-term debt, preferred stock, and equity and, with attention to the proportion of each in the capitalization, combine them to determine an overall cost of capital. But even among these companies, differences in making calculations, assigning rates, and weighting capital elements produce results that are not completely uniform.

Some companies base cost-of-capital estimates on current or marginal rates; others rely on an average of past experience. Similarly, weighting of components can be accomplished on the basis of either existing or planned capital structures and by using either the book or market value of securities.[4]

Debt and Preferred Shares

The cost of the debt and preferred stock segments of capital structures are readily calculated. To determine the cost of debt, the borrowing rate is multiplied by the corporate income-tax rate and the product is subtracted from the interest rate. For example, if lenders charge 15 percent, and the corporate tax rate is 46 percent, the effective cost of borrowing is 8.1 percent. To determine the cost of preferred stock, the established dividend is divided by the issue price of the security. Thus, a preferred issue sold for $25 per share and paying a $4 annual dividend would have an after-tax cost of 16 percent because dividends are not tax deductible expenses.

Equity

The capital asset pricing model (CAPM) is the most popular approach to costing equity among survey participants. Those adopting it consider three elements in calculating the cost of equity: the risk-free rate of return, the excess over this rate or risk premium offered by stocks in general, and the beta, or relative risk, attached to their own stock.[5]

For illustrative purposes, assume that U.S. Treasury bonds yielding 13 percent reflect the risk-free rate of return, that stocks in general are expected to return 17 percent, and that .8 is the beta of the stock whose cost is to be determined. The cost of equity for this company is computed by adding the risk free rate of return to the product of the risk premium multiplied by the beta. So determined (13% + [17% – 13% x .8]), it is 16.2 percent.

Some respondents rely on present and prospective dividend yields to calculate the equity portion of capital cost. A company using this approach might, for instance, divide the current annual dividend paid on its common stock by the market price of its shares, and add to this quotient an anticipated dividend-growth rate to arrive at an estimated cost of equity. Thus, a firm whose common shares sell for $60 and pay a $3 yearly dividend that is expected to grow by 9 percent annually would compute a 14-percent cost of equity.

Several simply rely on price/earnings ratios to determine the cost of equity. When this is the case, reciprocals of price/earnings ratios are held to represent equity costs. Thus 20 percent might be judged to be the cost of equity for a company whose shares sell for $50 and whose earnings per share amount to $10.

Weighted Average Cost of Capital

After determining the cost of the various components, many companies combine them in a way that reflects the relative importance of each to compute an overall cost of capital. Exhibits 1 and 2 show how two companies calculate a weighted average cost of capital.

A steel company (Exhibit 1) applies the CAPM to determine the cost of equity and the marginal corporate tax rate to determine the after-tax cost of debt. The company then combines these costs on the basis of four parts equity to

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[4] For a discussion of company practices, see Arthur V. Corr, *The Capital Expenditure Decision*, New York; National Association of Accountants, 1983.

[5] For a review of CAPM in estimating the cost of equity capital, see James C. Van Horne, *Fundamentals of Financial Management*, (4th Edition). Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1980, pp. 358-359.

Exhibit 1: Cost of Capital Computation: A Manufacturing Company

COST OF CAPITAL

Risk-Free Interest Rate = 11.0%
Market Risk Premium = 3.0%
Company Risk Index (Beta) = 1.42
Target Debt-to-Capital Ratio = 20.0%
Cost of Debt = 10.0%
Marginal Corporate Tax Rate = 48.7%

Cost of Equity

Cost of Equity = Risk-Free Rate + (Beta x Market Risk Premium)
= 11.0% + (1.42 x 3.0%)
= 15.3%

Cost of Debt (After-Tax)

Cost of Debt (After-Tax) = Cost of Debt (Before Tax) x (1 - Corporate Tax Rate)
= 10.0% (1 - 48.7%)
= 5.1%

Weighted Average Cost of Capital

WACC = (Cost of Equity x % Equity) + (Cost of Debt x % Debt)
= (15.3% x 80%) + (5.1% x 20%)
= 13.2%

one part debt because its targeted capital structure calls for a mix of 80 percent equity and 20 percent debt.

At Philip Morris Incorporated (Exhibit 2), equity cost is determined by adding the dividend yield to the product of the earnings retention rate multiplied by the return on equity. The equity cost so determined is then combined with the after-tax cost of debt in a way that takes into account the proportion of each in the company's capital structure to arrive at an overall cost of capital.

Other Methods

A few participants equate borrowing costs with capital costs. They determine the cost of capital either by testing the water, that is, by determining a rate by way of an actual bond offering through an underwriter. Or they observe the rates attached to the debt issues of competitors or others that carry ratings identical or comparable to their own. Only one respondent equates equity cost with the cost of capital; it has no debt in its capital structure.

Hurdle Rates

Hurdle rates, or cutoff rates as they are sometimes called, usually spell out the minimum return an investment proposal should offer in order to be considered. They are reported by 83 (approximately two-thirds) of the companies surveyed. Eighteen of the remaining forty-two respondents fix such rates but do not provide details; the balance do not use them.

Among those specifying cutoff rates, the range is from 9.4 percent to 40 percent. Twenty users employ more than a single rate and for twenty-five the rate equals or exceeds 20 percent for some or all projects. The most common single rate reported—by thirteen companies—is 15 percent.

Companies' hurdle rates sometimes, but not always, coincide with their cost of capital, as Table 2 shows. In many firms, cutoff rates are fixed above the cost of capital or vary from the same cost to a higher one. These rates occasionally range from less to more than the cost of capital. Only rarely do hurdle rates fall below the cost of capital and then usually only temporarily or because of special circumstances.

Companies that set hurdle rates above those determined for capital costs do so for a variety of reasons. Chief among them are the desire to compensate for the uncertainty of returns due to the impreciseness of forecasts and the need to allow for noneconomic projects (e.g., pollution control facilities). An infrequently cited reason for this posture is the availability of many more attractive projects than can be funded..

"The reason that this rate is higher than our weighted average cost of capital is twofold," says the director, budgets and financial analysis, of an office equipment manufacturing company. "First, not all capital investments provide a return (OSHA, etc.), and, second, this rate is risk adjusted." A specific example of the use of risk-adjusted hurdle rates comes from the director, capital budget administration, of a participating hardware manufacturer, whose cost of capital is 16 percent: "For years we have used a hurdle rate of 20 percent after-tax for cost-reduction projects and higher rates of 25 to 30 percent for new product projects."

Similarly, companies that vary hurdle rates from corresponding with to higher than their costs of capital usually do so to adjust for risks. Projects on which returns may be forecast with great certainty (such as those for replacement purposes) may need only to promise a return matching the cost of capital to qualify for consideration. But others, perhaps involving outlays for unfamiliar businesses where returns are less sure, may be required to offer a premium yield to be considered candidates for inclusion in the capital budget.

Where hurdle rates coincide with costs of capital, they are not always rigidly applied to individual projects. Rather, the returns from all capital investment outlays are expected

Exhibit 2: Cost of Capital Computation: Philip Morris Incorporated

Equity Cost:

Dividend Yield:

$$\frac{\text{Dividend Rate Per Share @ 12/31/83}}{\text{Market Price Per Share @ 12/31/83}} \quad \frac{\$\ 2.90}{\$71.75} = 4.0\%$$

Retention Rate:

$$\frac{\text{Dividends Declared}}{\text{Net Earnings}} \quad \frac{\$365.8}{\$903.5} = 40.5\%$$

100.0%-40.5% = 59.5%

Return on Equity:

$$\frac{\text{Net Earnings}}{\text{Average Stockholders Equity}} \quad \frac{\$\ 903.5}{\$3{,}848.3} = 23.5\%$$

Equity Cost:

Dividend Yield + (Retention Rate × Return on Equity)
4.0% + (59.5% × 23.5%) = 18.0%

Cost of Debt:

After Tax Cost of Debt = 4.7%

Weighted Average Cost of Capital:

Equity	$4,033.7 =	56.7% ×	18.0% =	10.2%
Debt	$3,074.9 =	43.3% ×	4.7% =	2.1%
	$7,108.6 =	100.0%		12.3%

to exceed the minimum criterion established by the hurdle rate—often by a considerable margin.

Several companies employ hurdle rates that cover a wide range, extending from lower than to higher than the cost of capital. Two reasons are advanced by those who follow this course: variations in the cost of capital of underlying units and variations in the returns offered by desirable projects.

Some companies also compute a cost of capital for their strategic business units (SBU's), in addition to determining an overall cost figure. Because these fall both below and above the corporate cost of capital, so do the hurdle rates. In like manner, other companies include projects in their capital budgets for strategic reasons that offer returns that are lower than the cost of capital. By fixing hurdle rates for other projects higher than the cost of capital they strive to obtain total returns that equal or surpass the corporate cost of capital.

Table 2: Hurdle Rates Vis-a-Vis Costs of Capital in 80 Participating Companies

Relation of Hurdle Rates to Cost of Capital	Number of Mentions
Hurdle rates:	
Higher	38
Identical	30
Identical to higher	6
Lower to higher	4
Lower or lower to same	2

Criteria or Guidelines?

While many concerns adhere strictly to the investment barriers erected against projects whose promised returns do not satisfy hurdle rates, there are some that do not. In these unusual cases, cutoff rates, while considered, do not dictate a "go-no go" judgment on capital-expenditure proposals. They are but one of a number of considerations that have an impact on decisions and, sometimes, are outweighed by other influences. The manager, construction and property accounting, in a participating manufacturer where this is the situation comments:

"We have a minimum hurdle rate but, practically, it has little meaning. Projects that sustain operations are evaluated judgmentally on the criticalness of the facilities involved, the alternatives, and the strategic outlook for the facility, market or product involved. Projects that add profits are evaluated on the calculated rate of return, factored judgmentally for risk. Higher returns are expected from facilities, markets or products deemed to be static or sustaining than for those expected to grow and modernize. Capital constraints have dictated that only projects with returns substantially above the hurdle rate be considered."

Reasons for Not Using Hurdle Rates

Twenty-four (almost one-fifth) of the participating companies do not fix cutoff rates for capital investments. But this does not signify a lack of interest in returns offered by proposals. Rather it indicates a belief that decision criteria (subsequently discussed) other than hurdle rates are more appropriate to existing circumstances.

Some diversified companies, especially those that do not compute the cost of capital for strategic business units, refrain from setting a corporate hurdle rate because they hold that doing so would work to the benefit of some underlying components and to the detriment of others. For example, the imposition of a universal rate closely tied to the corporate cost of capital might make it extremely difficult for low-risk, low-return units to propose suitable projects. Further, such firms fear that the establishment of a

Table 3: Techniques of Financial Analyses Used by Participating Companies

Technique	Number of Mentions (Multiple responses)
Discounted Cash Flow	
Internal Rate of Return	75
Net Present Value	37
Discounted Cash Flow (unspecified)	22
Payback	32
Accounting Return	20
Other	32

common rate could prompt an unwanted repositioning of the entire business portfolio.

Appraisal Techniques

Before making the major investment outlays projected in capital budgets, most companies subject spending proposals to detailed analyses. These reviews seek to confirm that the projects are consistent with the firms' long-term goals and provide an efficient means of accomplishing them.

Financial analysis is a key element in reaching decisions on proposed capital expenditures. For the most part it focuses on an examination of economic data, especially investment outlays and cash inflows over the expected productive lives of the projects. Regardless of the evaluation approach employed, these factors are ordinarily examined (Table 3).

Of course, other considerations besides those of a strategic or financial nature often enter into commitment decisions. Intangible pluses and minuses sometimes derive from the implementation of projects—effects on employee well-being and morale or on perceptions of the company in the community or marketplace, for example—and these largely unquantifiable influences often have a bearing on capital outlays.

Just as in the 1974 Conference Board study, most of those queried continue to use a combination of financial analysis techniques to evaluate potential capital investments. Although the techniques employed are largely unchanged, far more reliance is currently placed on discounted cash flow methods than was formerly the case. And payback, while still sometimes calculated, is virtually always used in combination with some other evaluation approach. In 1974, it was used as the sole criterion in assessing capital expenditures by one out of seven participating companies. Speakers at a recent Conference Board meeting urged that evaluations of investment proposals break new ground by extending consideration to important factors that are not typically weighed in these conventional analyses. (See above box.)

Broadening Analytical Reviews

At a conference on "Meeting the New Industrial Competition," in the spring of 1983, several speakers recommended that capital-expenditure analysis go beyond traditional examinations of marginal benefits if the needs of the "factory of the future" are to be met.[1] Appraisal approaches that will encourage the introduction of new processes are favored. Reviews, they say, should consider not only the savings but also the synergistic advantages—the possibility of producing new as well as existing products of better quality, for example—offered by new investments.

In addition, proponents of broadened capital-investment evaluations believe that decision makers should weigh the answers to questions now seldom asked during the capital budget-approval process. Among them: Will market share suffer if the investment is not made? Can the evolving needs of the marketplace be met with existing equipment? Will future operating results be impaired if the capital expenditure proposal is rejected?

[1] James K. Brown (ed.), *Manufacturing: New Concepts and New Technology to Meet New Competition*, Conference Board Report No. 844, 1984.

Because it is beyond the scope of this report to explore in depth the comparative advantages of the various financial-appraisal techniques, only brief descriptions of the principal methods are presented here. (For those who wish further discussion of the pros and cons of each method, a bibliography is included in the box on p. 9.)

Internal Rate of Return

The internal rate of return (IRR) is the appraisal technique most frequently cited by respondents to this study. Also known as the discounted cash-flow rate of return and the yield, or investor's method, it is used singly and in combination with other appraisal criteria to determine the acceptability of investment projects. It is also an approach often favored by participating firms that do not establish cutoff rates for capital expenditures.

IRR is the discount rate that equates the present values of the cash outflows and inflows associated with a capital investment. When determined, the internal rate of return may be compared with an established hurdle rate for decision guidance. Or it may simply be considered as the maximum financing rate at which a project might be profitably undertaken.

Net Present Value

Net present value is another discounted cash flow method of financial analysis favored by respondents to appraise capital investment outlays. Ordinarily applied by companies that set hurdle rates for investment outlays, the method

Additional Publications

Appraisal techniques, as well as other aspects of capital-expenditure management, are examined in many standard financial textbooks and in a number of research monographs. Examples include:

Harold Bierman, Jr., and Seymour Smidt, *The Capital Budgeting Decision*, N.Y.: Macmillan Publishing Co. Inc., 5th Edition, 1980.

Arthur V. Corr, *The Capital Expenditure Decision*, N.Y.: National Association of Accountants, 1983.

Wilbur G. Lewellen, *The Cost of Capital*, Dubuque, Iowa: Kendall-Hunt Publishing Co., 1978.

James C. Van Horne, *Fundamentals of Financial Management*. Englewood Cliffs, N.J.: Prentice-Hall Inc., 4th Edition, 1980.

J. Fred Weston and Eugene F. Brigham, *Managerial Finance*. Hinsdale, Illinois: The Dryden Press, 7th Edition, 1981.

Some articles pertaining to the capital-investment process that have appeared recently in the business press are:

Jonathan B. Welch and Timm L. Kainen, "Risk-Adjusted Multiple Hurdle Rates: Better Capital Budgeting," *Financial Executive*, May, 1983.

Robert H. Hayes and David A. Garvin, "Managing as if Tomorrow Mattered," *Harvard Business Review*, May-June, 1982.

Allen H. Seed, III, "Structuring Capital Spending Hurdle Rates," *Financial Executive*, February, 1982.

Surendra S. Singhvi and Robert J. Lambrik, "Investment Versus Financing Decision," *Management Accounting*, March, 1984.

C. Thorben Thomsen, "Dangers in Discounting," *Management Accounting*, January, 1984.

Table 4: Payback Criteria in 32 Participating Companies

Payback Period in Years	Number of Mentions
1-2	1
1.5	1
2	3
2.5	1
3-4	1
3.5	1
4	1
Under 5	2
3-5	5
4-5	1
5	7
5-8	1
5-10	1
10	2
Other	4*

*Includes two of one-half depreciable lives of assets.

determines a dollar amount that represents the difference between the present value of the cash outflows and inflows related to a given capital expenditure proposal. The discount rate employed is the established hurdle rate—or any other rate the company believes appropriate. When the present value of receipts exceeds that of outlays, the net present value of a proposal is positive—an indication that the investment satisfies the return criterion.

Both the internal rate of return and net present-value analytical techniques are based on discounted cash-flow examinations. However, they differ in an important respect: The IRR determines the return offered by a project whereas net present value reveals only whether the return offered by a project meets minimum requirements. For example, an internal rate-of-return analysis might reveal a return of 20 percent for a project under study. A net present-value appraisal for the same project, using a 15-percent hurdle rate for discounting purposes, would indicate only that the project had a positive net present value and, therefore, promised a return in excess of the cutoff rate.

Payback

The payback technique is still used to a certain extent in the analysis of capital-expenditure proposals, although it is declining somewhat in popularity. Among companies providing their experiences for this survey, thirty-two set payback periods (Table 4); thirty-one do not. Forty-two do not impose them as investment criteria but do calculate them; and the remaining twenty do not comment on their usage.

Payback measures the time required to recoup the outlays for an investment from the cash flows it generates. The declining use of the method may trace to a more widespread recognition of its deficiencies, namely: failure to recognize the time value of cash flows and total disregard for revenue streams beyond the point where they provide for recovery of investments. Nevertheless, payback (sometimes calculated on a discounted basis) is considered by some to be helpful as a measure of risk. Such firms believe the shorter the payback period, the more limited the risk, and vice versa.

Accounting Rate of Return

Some companies that calculate return on investment use accounting, rather than economic, data. A popular

Exhibit 3: Mathematical Techniques Employed in Project Evaluation: A Manufacturing Company

Following examples illustrate the principal financial measures applied to a hypothetical project with a six-year life. Cost of capital is 15%.

Internal Rate of Return (IRR)

Although IRR is typically derived with computer assistance, the following illustrates the underlying mathematics of a 28% IRR calculation.

Time Period	(1) Unrecovered Investment-Beginning of Period	(2) Net Cash Flow	(3) 28% Return on Beginning Unrecovered Investment	(4) Investment Recovered (2 - 3)	(5) Unrecovered Investment End of Period (1 - 4)
1	$ 5,000	$(3,000)	$1,400	$(4,400)	$ 9,400
2	9,400	(2,000)	2,632	(4,632)	14,032
3	14,032	4,000	3,929	71	13,961
4	13,961	6,000	3,909	2,091	11,870
5	11,870	8,500	3,324	5,176	6,694
6	6,694	9,000	1,874	7,126	(432)*

Not zero because the IRR is actually 28.4

Profitability Index (PI)

Time Period	Net Cash Flows	Cash Flows Discounted At 15%	
		Cash Outflows	Cash Inflows
0	$(5,000)	$(5,000)	$ -
1	(3,000)	(2,609)	-
2	(2,000)	(1,890)	378
3	4,000	(225)	2,855
4	6,000	(200)	2,630
5	8,500	(150)	4,376
6	9,000	(100)	3,991
		$10,174	$15,230

$$PI = \frac{\$15,230}{\$10,174} = 1.5$$

approach is to divide the average annual income on an investment by the original investment outlay to determine the annual rate of return on the investment. Another rate of return, the average return on average investment, is derived by subtracting the original investment outlay from the total income on the investment and dividing that remainder by half the amount of the investment outlay multiplied by the number of years of useful life of the project. And there are numerous other variations.

Return-on-investment calculations such as these are readily understood and easily applied. Even though such approaches do not discriminate among the timings of derived benefits, they do afford a general indication of an investment's potential return.[6]

Companies occasionally set different criteria depending upon whether projects are evaluated on the basis of cash flow or accounting data. A participating food manufacturer, for instance, fixes a 15-percent guideline for IRR appraisals and a 45-percent yardstick for a calculation that determines a return on funds employed (ROFE).

Other Analytical Approaches

Participants employ additional methods to appraise capital investment proposals. The profitability index or benefit-cost ratio, projections of operating results, MAPI (Machinery and Allied Products Institute) method, judgment, unspecified forecasting techniques, modeling, and determinations of minimum revenue requirements, are each mentioned several times. Often these techniques are used

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[6] See, for example, Francis J. Walsh, Jr., *Managing Business Performance*, The Conference Board, Research Bulletin No. 153, 1984.

Discounted Payback

Time Period	Net Cash Flows	Present Value at 15%	Cumulative Present Value	Elapsed Time (Yrs.)
0	$(5,000)	$(5,000)	$(5,000)	-
1	(3,000)	(2,609)	(7,609)	1
2	(2,000)	(1,512)	(9,121)	1
3	4,000	2,630	(6,491)	1
4	6,000	3,430	(3,061)	1
5	8,500	4,226	1,165	.7*
			Discounted Payback =	4.7 Yrs.

*3,061 ÷ 4,226 = .72

Net Present Value (NPV)

Time Period	Net Cash Flows	Discounted at 15%	
		Present Value Factor	Discounted Cash Flows
0	$(5,000)	1.0000	$(5,000)
1	(3,000)	.8696	(2,609)
2	(2,000)	.7561	(1,512)
3	4,000	.6575	2,630
4	6,000	.5718	3,430
5	8,500	.4972	4,226
6	9,000	.4323	3,891
		NPV =	$ 5,056

as supplements to others, especially those based on discounted cash-flow analysis.

The profitability index, for example, computed by dividing the present value of cash inflows by the present value of cash outflows associated with a project, provides an indication of the margin of safety afforded by an investment. Its calculation as well as those of several of the more frequently employed techniques of financial analysis—internal rate of return, payback, and net present value—are illustrated or indicated in Exhibit 3.

Analytical Approaches in the Absence of Hurdle Rates

Responding companies that do not set cutoff rates for capital-investment proposals employ many of the same approaches to analysis as those that do. Most nonusers of cutoff rates rely principally on IRR and payback analyses. They also find qualitative analyses, including reviews of strategic requirements, useful. Some examine the impact on earnings and cash flows of investment proposals. And utilities consider the likely effects of investments on shareholders and ratepayers.

Why Techniques are Chosen

Companies that rely on the internal-rate-of-return approach to evaluation generally value its usefulness in ranking projects according to their promised profitability. Adherents of the net present-value approach are usually attracted to the technique not only because (like IRR) it recognizes the time value of money, but also because it permits a quick test of a proposal's ability to meet a hurdle rate criterion. Payback's boosters not infrequently favor the approach despite its admitted shortcomings because it furnishes helpful insights into the risk and liquidity characteristics of a project. A few also find that it permits the imposition of constraints that contribute to the attainment of long-term corporate goals. Return-on-investment advocates often cite the method's ready calculation and ease of understanding, especially by interested nonfinancial executives, as reasons for its use.

Similarly, supporters of other approaches mention valued attributes as reasons for their selection. A participating manufacturer, for example, finds the benefit-cost ratio appropriate in making comparisons between mutually exclusive proposals that have differing outlay and receipt streams.

Here are some representative comments explaining the reasons for respondents' choices of financial analysis techniques:

> "The internal rate of return and the net present-value methods are used to incorporate the time value of money into the analysis. These methods are also used to compare and/or rank alternative proposals."
>
> *Manager of Domestic Finance, Retailing Company*

* * *

> "Payback analysis is applied to cost-savings projects in order to avoid investing in businesses that have questionable long-term strategic value to the corporation—although the expenditure in question may have an acceptable IRR or net present value."
>
> *Vice President and Controller Forest Products Company*

* * *

Analytical Refinements

Information derived from the analytical techniques just described is a key factor in the investment-selection process for 53 respondents. But the other 72 companies insist on some additional fine-tuning before making decisions on capital expenditures. The latter have no quarrel with the results produced by the standard calculations. However, they believe that the data that go into them leave something to be desired, especially if the effects of inflation and uncertainties of projected cash flows are to be considered.

Inflation Adjustments

To take into account the decrease in purchasing power caused by inflation, some companies adjust the value of projected cash flows used in the determination of returns from capital investments. These adaptations are often accomplished by making cash-flow forecasts in current (or nominal) dollars rather than in historical dollars.[1] The vice president and controller of a food company that follows this practice both domestically and abroad notes:

> "Financial returns for new capital investments at our company are developed from projections of the incremental costs and benefits associated with the project stated in current dollars (i.e., reflected anticipated inflation over the planning horizon) terms. The standard analytical time frame for new investments is 10 years unless the investment is known to have a shorter useful life.
>
> "Returns on international subsidiary projects are projected in current local currency terms and then translated into U.S. dollars (under FAS-52 or FAS-8, depending upon location) at exchange rates forecast for the investment time horizon by our corporate treasurer's department. U.S.-dollar financial returns are the primary measure of return for the company's foreign subsidiaries, although local-currency returns may be provided for supplemental perspective on investment proposals."

Concerns that forecast cash flows in nominal dollars to compensate for the influence of inflation often also express the discount rate used in net present value and other evaluations in current terms. They believe such consistency makes for more reliable appraisals of capital-investment proposals and insist on its application. A paragraph in the procedure manual of a participating manufacturer, for instance, contains this instruction:

> "Cash flows should be estimated in nominal terms (including inflation). Additionally, the required rate of return for project acceptance should also be expressed in nominal terms. Thus, cash flows should be discounted at an interest rate which includes an inflation factor. Also, various components of the total cash flow should be estimated separately. For example, for a given project, product prices may be forecast to increase at a rate lower than the inflation rate. Similarly, tax benefits on depreciation do not increase with inflation as only the original cost of assets is depreciated."

Several approaches are possible to make allowance for the impact of inflation. For example, an expected average inflation rate over the term of the project may be factored into the analysis. Or expected inflation rates may be included on a year-by-year basis—or on any other basis deemed appropriate. The accompanying box contains a description of how one participating company takes inflation into account in its unusual approach to the appraisal of capital investment proposals.

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[1] For a general discussion of attempts to remove the distortive effects of inflation from corporate financial reports, see Francis J. Walsh, Jr., *Recognizing Inflation in Accounting*, The Conference Board, Report No. 783, 1980.

Factoring Inflation into Evaluations

A large, integrated energy company recently abandoned its traditional practice of using a fixed discount rate to evaluate investment proposals. The spur was the period of high inflation that occurred during the late 1970's and early 1980's.

The firm came to believe that the former approach was not only inconsistent in its treatment of inflation, but also that it was penalizing the returns forecast for certain projects. Expecting a long-term decline in the rate of inflation, the company projected the various elements of investment cash flow accordingly. But by applying a fixed discount rate (which incorporated an implied constant rate of inflation), it was actually employing two different inflation assumptions in its capital-expenditure analyses. Further, use of a fixed discount rate incorporating the then high inflation rate produced a lower project present value than was actually warranted with inflation on the wane—a consequence that, in this company's view, created an unjustified bias against longer-term projects that are fundamental to its business.

To rectify this situation the firm developed a discount rate methodology that explicitly recognizes the two components of an investor's required return: a real rate of return for the use of capital and an additional return to compensate for the impact of inflation. The former component represents the real weighted average cost of capital; the latter (tied to the GNP deflator because of its applicability to broadly based business activity), the expectation for inflation.

While reviewing its position on discounting, the company also made a reassessment of project ranking methods. Finding inadequacies in some standard ranking techniques, especially an inclination to favor shorter-term projects, the firm sought a new approach. It wanted a measure not affected by project size, one that "allows for the correct recognition of the time value of money in the discounting process, and that is not biased against long-lived projects or projects with longer-term payouts."

As a result of its efforts the company developed a measure labeled investment efficiency (IE) that determines the amount of project value generated per dollar of investment. IE equals the net present value of the project divided by the present value of the investment with the present value of the investment defined as the largest negative cumulative present value of a project's cash flows. A project offering returns equal to the cost of capital would have an investment efficiency of zero using this method of appraisal. The company is convinced that use of the measure permits it to rank projects according to their ability to generate economic value and permits the setting of meaningful hurdle criteria.

The following tabulation illustrates the application of the variable discount rate and investment efficiency methodologies implemented by the company. Components of the annual discount rate—the real rate of return and the inflation assumption—used in the example are hypothetical and do not reflect actual usage.

Year	Discount Rate	=	[Real Return	+	Inflation Component]	Cash Flow (Current $)	PW_{var}* (by year)	PW_{var}* Cumulative	
1984	20		(10	+	10)	-30	-24.6	-24.6	
1985	21		(10	+	11)	-15	-10.0	-34.6	
1986	21		(10	+	11)	20	10.8	-23.8	
1987	20		(10	+	10)	-30	-13.2	$\boxed{-37.0}$	PW_{var}*(Investment)
1988	19		(10	+	9)	40	14.6	-22.4	
1989	18		(10	+	8)	60	18.3	- 4.1	
1990	17		(10	+	7)	80	20.5	16.4	
1991	16		(10	+	6)	-20	- 4.4	12.0	
1992	17		(10	+	7)	100	18.5	30.5	
1993	15		(10	+	5)	120	19.1	$\boxed{49.6}$	Net PW_{var}*(Project)

$$\text{Investment Efficiency} = \frac{\text{Net } PW_{var}{}^{*}\text{(Project)}}{PW_{var}{}^{*}\text{ (Investment)}} = 1.34$$

*PW_{var} = Present worth, using the variable discount rate.

Risk Analyses

Skeptics among respondents refuse to accept outcomes predicted by capital-expenditure evaluations at face value. They maintain that since these appraisals incorporate data based on predictions of future events, the results are, at best, uncertain.

They engage in various forms of risk analysis to deal with this problem; that is, to improve the utility of predicted outcomes for capital investments. Instead of pinpointing project returns these examinations are usually designed to assess the impact on results of variations in key input variables such as cost of goods sold, to define ranges within which results will fall, or even to produce probability distributions outlining the likelihood of achieving any of the possible returns.

Forty-four of the companies surveyed rely on sensitivity analysis (a form of risk analysis) to alert them to the relative significance of key decision elements, at least for appraisals of larger capital investment outlays. In efforts to weigh the importance of critical input factors (sales, price, and the like), these concerns first isolate and then test their importance to predicted project results. They do this not by using only the deterministic or single-point most likely value for the input factor but by measuring the variable's impact on overall returns at several points within its range. For example, isolation and testing of a selling price variable might reveal that considerable downward pressure is exerted on the forecast return at the lower end of its range. This possibility might prompt management to abandon the project unless strong evidence could be produced to show that the actual price would be close to or higher than, its deterministic value.

Sensitivity analysis is often facilitated by the use of computers. One respondent even reports development of software that "can determine the degree of change in any variable required to bring the financial return on the 'base case' to the minimum acceptable level, that is, the hurdle rate."

Some concerns believe that graphs provide an excellent means of illustrating the potential impact of key input variables on project returns. Exhibit 4 contains such a presentation. It shows, for example, that a 30-percent decline in selling price would lower the project's IRR from about 27 percent to about 10 percent—a possibility certain to demand critical review. On the other hand, it indicates that a 30 percent increase in investment outlays would only reduce the project's IRR by approximately 2 percentage points to 25 percent—an eventuality that might cause little stir.

Sixteen of the companies in the sample, many of which employ sensitivity analysis, attempt to go even farther by defining the probabilities of achieving specific returns on investment outlays. These concerns establish risk profiles for major capital-expenditure projects by using either decision trees or computer programs involving gaming techniques.[8]

Exhibit 4: Sample Sensitivity Graph: A Manufacturing Company

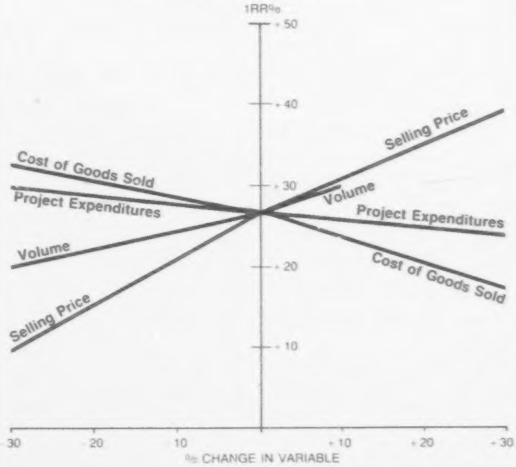
PROJECT NO. 2110—X PLANT
MANUFACTURING FACILITIES FOR PRODUCT A
CATEGORY: CAPACITY INCREASE—ESTABLISHED PRODUCT

KEY ASSUMPTIONS—PRODUCT A
(Average Annual Change in %)

	1980-1982(A)	1983-1990(B)	1991-2004(C)
GNP Deflator			
Sales Volume			
Selling Price			
Raw Material A Price			
Direct Labor Rate			
Steam and Electricity Prices			

(A) 3-Year History Prior to Authorization
(B) Authorization to End of Discounted Payback Year
(C) Remaining Project Life

IRR Sensitivity to Changes in Key Project Assumptions



By assigning likelihoods to particular results, such analyses provide much more than information on the range of possible returns. However, they are not without detractors. The controller of a participating manufacturer warns: "Generally speaking, investment proposals deal with rough assumptions of results; to apply sophisticated quantitative analysis adds an air of accuracy that may not be warranted or appropriate."

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[8] See, for example, J. Fred Weston and Eugene F. Brigham, *Managerial Finance*, (7th ed.). Hinsdale, Illinois: The Dryden Press, 1981, pp. 516-523.

A variety of other techniques is used by participants to assess risk. As mentioned earlier, some concerns fix two or more hurdle rates, assigning them to projects in accordance with established procedures. For example, most of the 20 companies employing multiple hurdle rates use the lower rate as the cutoff for replacement projects and a higher rate for projects involving outlays for new products, or for other investments where returns are considered less certain.

"A combination of pessimistic, most likely and optimistic analyses is used to refine predicted results," comments the vice president and treasurer of a drug company. In like manner, several other companies prepare projections based on different scenarios to sharpen perspectives and to permit avoidance of undertakings that could result in serious reverses. And a few others rely on payback analysis or judgment to provide insights into risk.

Discounting and Disinvestment

Does reliance on appraisal techniques that are based on discounted cash flows (e.g., net present value and IRR) prompt companies to disinvest—that is, to reject capital expenditures that are important to their survival? Opinion is divided among respondents on this question (Table 5).

Concerns that believe the use of quantitative discounting methods promote disinvestment often point to the tendency of these approaches to favor projects offering near-term returns as reasons for their views. Some also question whether the cash flows and cutoff rates employed in these analyses are appropriate. The following comments by executives of this persuasion are representative:

"Total reliance on discounting techniques would certainly tend somewhat to discourage investment, particularly for businesses in which many opportunities are characterized by long gestation periods. We tend to use discounting techniques to discriminate between alternative approaches to accomplish an objective to a greater extent than we do to select the objective itself. As a consequence, discounting has a more significant effect on the form than on the magnitude of our investment."

Chief Financial Officer,
Aircraft and Armaments Company

* * *

"The reason why discounting may promote disinvestment is because one may establish unrealistic hurdle rates based on historical book returns that do not reflect the cumulative effect of inflation. In other words, if one calculates the current-value return on investment, it is much lower—perhaps one half of reported returns using historical cost data. Therefore, hurdle rates based on unrealistic historical cost information may lead one to reject investments that would maintain cost-effective productive capacity, resulting in disinvestment."

Corporate Controller,
Medical Supply Company

Table 5: Participants' Views of Discounting Appraisal Techniques

Cause Disinvestment	Number of Mentions
Yes	11
Not ordinarily	27
Possibly	15
No	45
No opinion	27
	125

Forty-five participating companies have naught but praise for the effectiveness of discounting methods used to appraise capital-investment outlays. If anything, supporters maintain, these techniques ensure proper investment. The comment of the manager, financial planning and analysis of a steel company, is typical:

"By discounting future returns from an investment, one make the future dollars saved or gained comparable to the current dollars being spent. Only by making this adjustment can one see if more money will be returned from an investment than was put into it. If the expected returns are not as great as the project's cost, one would be wasting the company's money by making the investment. By building projects that do not meet the hurdle rate, the company's market value is reduced—a true case of disinvestment."

But some defenders of discounting techniques are a little more reserved in their support. The 27 in this category maintain that discounting techniques will not produce disinvestment provided they are applied in a fitting manner. Proper application, they believe, demands that results projected by conventional discounting applications not serve as the be all and end all of the decision-making process. Other quantitative measures—the impact of not making an investment on price, and market share, for examples—as well as such qualitative considerations as conformity with long-range goals must be weighed and, if need be, given precedence to guard against unwanted business liquidation. Misuse of discounting, of course, these supporters admit, may lead to disinvestment.

The controller of a petroleum company offers this comment:

"Corporate planning does not subscribe to the theory that reliance on discounting appraisal techniques tends to promote disinvestment. To the extent this occurs, it is usually caused by one of two analytical deficiencies—inappropriately defined and presumably high discount rates, or an improperly defined set of base or 'do nothing' conditions. Further, total reliance on quantitative methods is mitigated by consideration of mentioned qualitative factors and issues."

Another respondent, the manager, budgets and business analysis, of a forest products company, makes this observation: "It is entirely possible that many companies have been ignoring low-risk, low-return internal projects in favor of higher-yielding diversifying acquisitions. While we have set a relatively high (compared to our estimated cost of capital) hurdle rate for internal projects, we do not necessarily adhere to it. Our primary corporate strategy is to protect and to improve the strategic position of our existing businesses."

Fifteen companies have reservations about the universal applicability of discounting techniques to the analysis of capital-expenditure proposals. Some of these, like their counterparts who caution against the exclusive use of net present-value or IRR based analyses, fear that improper conclusions may be reached by companies that put too much emphasis on results forecast by discounting appraisal methods.

Even stronger doubts about the efficacy of these approaches under all circumstances exist in a few participating organizations, especially among natural resource firms. In situations where substantial outlays are required over periods of perhaps several years before returns begin to flow, they wonder if the application of discounting analytical techniques leads to optimal decision-making. As the vice president-finance of a petroleum company puts it: "We are concerned, however, whether or not discounting provides an accurate appraisal of all projects (such as long-life cash-generation projects) and are reevaluating our capital-investment criteria."

Authorizing Investment Outlays

Except in isolated instances, budget approval does not mean project approval. Months, or even years, are needed to bring proposals from conception to implementation. Recognizing that conditions can, and often do, change over time, most responding concerns require final clearances on projects to ensure continued viability before the commitment of funds.

These "last looks" are sometimes taken by a company's board of directors, especially if the project involves substantial outlays. But more frequently, either because the number of smaller projects tends to predominate or because of board decree, responsibility falls to committees or is entrusted, in varying degrees, to individual members of the management team.

Role of Committees

Forty-five participating companies call on committees—some of the board of directors, others of management—to give ultimate approval to investment proposals; four of them use two committees for this purpose. The remainder choose to rely on their boards, management or staff departments to sanction projects.

Oversight of capital expenditures is but one of several duties for board committees. Management committees, however, tend to focus on investment matters, but not always exclusively on review and approval aspects as the following committee charter and excerpt from a corporate policy statement show:

"The Capital Allocation Committee is a subcommittee of the company's Policy and Strategy Committee. As such, CAC shall:

"(1) Establish the objectives and standards for the allocation of capital resources within the company, such resources to include both working and fixed capital;

"(2) Review the productivity and utilization of capital from a risk-return standpoint;

"(3) Recommend levels of capital investment and capital reallocation where appropriate; and

"(4) Oversee the capital budgeting process and post-audits of major investments."

—*A medical products company*

* * *

"As a committee appointed by the board of directors, the Capital Appropriations Committee is charged with the responsibility to develop and establish financial criteria for assessment of capital projects, to review major capital requests and report thereon to the board, and to administer the approval of authority levels for capital expenditures and disposition of capital assets."

—*A food products company*

* * *

But elsewhere capital expenditure committees, whatever their names (and as the appendix suggests, there is wide diversity), zero in on project reviews, acceptances or rejections, or both. Because these examinations concentrate on financial, long-range planning, and technical concerns, executives with expertise in these areas are often members of such committees. The following statements provide representative descriptions of the function and composition of review committees:

"A corporate Capital Review Committee reviews all projects over $100,000 on a quarterly basis and makes recommendations of approval, delay or disapproval to the Office of the Chairman. The Capital Review Committee is composed of the vice president and treasurer, vice president of engineering and maintenance, director of corporate financial plan analysis and capital budgeting. The primary emphasis is on review of the strategic financial and engineering aspects of each project."

—*Vice President and Treasurer,*
Pharmaceutical Company

* * *

"Our Executive Management Committee (EMC) reviews all capital expenditure proposals that move to the board of directors. The EMC is the policy and decision-making management committee. It includes the chairman, the president and CEO, three operating executive vice presidents, the chief financial officer, the chief technical officer, and the chief human-resource officer."

—Senior Vice President
and Chief Financial Officer,
Chemical Company

* * *

Where empowered to approve projects, these committees usually command a level of authority that ranks them just below that of boards of directors and above that enjoyed by individual corporate executives. Of course, while dollar limits on capital expenditure authority tend to increase with budget size, there are exceptions even among companies in the same industry with comparable capital budgets. For example, the executive committee of one food company can authorize expenditures of up to $2 million; but the capital committee of another food company, with a moderately higher budget, can approve capital outlays of only up to $1 million.

Capital Expenditure Limits

All save seven of the one hundred twenty-five companies providing their experiences for this survey delegate authority to approve investment projects, subject to dollar limits, to selected committees and managers (see appendix). In the exceptional firms, close control at headquarters is usually the rule: Authorization powers are not distributed among hierarchical levels of management but, rather, are reserved for the board of directors or a senior executive or committee.

Factors that affect the dollar limits set by companies include overall corporate and strategic business unit size, organization, degree of diversification, and management philosophy. Frequently, another important consideration is the level of confidence the executive granting the authority has in the individual receiving it.

Since these influences combine in varying ways and with differing emphases from company to company, dollar limits of capital expenditure authority extend over a wide range. Levels considered adequate in one firm might prove inappropriate to a competitor of like size because of structural differences, for example. Accordingly, companies tend to work out schedules of spending authority that enable them to operate effectively, and to review these prescribed limits either at fixed intervals, often yearly, or on an ad hoc basis whenever the situation demands.

How have dollar limits of capital expenditure authority changed in the last decade? Comparisons with limits in effect during 1974 are difficult for several reasons. First, the composition of the survey panels used to explore the question of dollar limits differed to a considerable extent; a large number of the companies included in the 1974 panel no longer exist as independent entities. Second, not all companies that participated in both studies presently delegate authority along the same hierarchical chain of command as in the past. Finally, some companies that took part in both surveys have undergone important structural changes during the past 10 years.

Despite these obstacles in the path of trend observation, a definite upward pattern in limits emerges among a sample of respondents to this and the earlier survey. Expanded requirements—tracing both to growth produced by internal progress and external activities such as acquisitions—and to the impact of a major inflationary outbreak, prompted virtually all of these firms to boost their limits, sometimes sizably, in recent years. For example, a chemical company that set upper spending limits of $4 million and $750 thousand for its executive committee and for individual executive committee members, respectively, in 1974 now gives the former expenditure authority extending from $5 million to $10 million and the latter limits ranging from $2 million to $5 million. Similarly, a drug company upped its limits for its chairman from a range of $250 thousand to $500 thousand to one of $1.5 million to $3 million, and for its president from a range of $125 thousand to $250 thousand to one of $250 thousand to $1.5 million. The firm's board formerly authorized all projects costing more than $500 thousand, but now exercises its prerogative only on projects requiring outlays in excess of $3 million.

For the most part, committees and executives of firms with large capital budgets possess higher limits of capital expenditure authority than their peers in firms with smaller capital budgets. There are exceptions to this general rule, however. And, even among companies from the same industry sharing other common characteristics (such as comparable budget amounts) there are considerable variations in levels of capital-expenditure authority. As a lengthy summarization of dollar-limit practices would provide only limited insight, specifics on the range of the capital budgets and on the dollar limits of authority in queried firms are presented on pages 21-31.

Limits on dollar expenditures are ordinarily assigned formally—in grants of authority, as sections of corporate manuals, or in bylaws of boards of directors. Utilization of written expenditure levels facilitates implementation of projects by largely eliminating the delays (in checking or obtaining clearances, for example) that sometimes arise when authority is transmitted orally. The following excerpt from the corporate controller's manual of a participating company illustrates the precision with which the written word permits the delegation of dollar limits of authority:

"The following authorities are hereby granted pursuant to the Board of Directors' resolution adopted on (date):

"1. All capital projects, including those which affect changes in the annual capital budget, shall be subject to approval as follows:

a. Any amount not exceeding $250,000 may be approved by any corporate vice president as to matters within his area of responsibility; and

Exhibit 5: Approval Levels for Capital Expenditures: A Manufacturing Company

	AMOUNT OF CAPITAL Project Expenditure				
Type	Corporate Staff & Groups/ Divisions With Sales Over $100 Million	Groups/Divisions with Sales Under $100 Million	Approvals Required	Final Approval —Company	Final Approval— Company's Parent
Land	Under $ 400,000	Under $400,000	Group/Division Gen. Manager Corporate Controller Chief Financial Officer Chief Operating Officer	Chief Executive Officer	Not required
	$ 400,000 through $ 749,999	$ 400,000 through $ 749,999	Same as above	Chief Executive Officer	President
	$ 750,000 through $ 999,999	$ 750,000 through $ 999,999	Same as above	Chief Executive Officer	Chairman
	$1,000,000 through $2,999,999	$1,000,000 through $2,999,999	Same as above	Chief Executive Officer	Executive Committee of Board of Directors
	$3,000,000 and over	$3,000,000 and over	Same as above	Chief Executive Officer	Board of Directors
Buildings, Machinery & Equipment	Under $ 250,000	Under $ 75,000	Group/Div. Controller & Other Functional Mgrs. as designated by Group/Division General Manager	Division General Manager or V.P.-Corp. Staff Function(A)	Not required
	$ 250,000 through $ 299,999	$ 75,000 through $ 149,999	Group/Division Gen. Mgr. Corporate Controller Chief Financial Officer	Level immediately above the Group/Division Gen. Manager. For Corporate Staff; Chief Executive Officer	Not required
	$ 300,000 through $ 400,000	$ 150,000 through $ 400,000	Group/Division Gen. Mgr. Corporate Controller Chief Financial Officer Chief Operating Officer	Chief Executive Officer	Not required
	$ 400,000 through $ 749,999	$ 400,000 through $ 749,999	Same as above	Chief Executive Officer	President
	$ 750,000 through $ 999,999	$ 750,000 through $ 999,999	Same as above	Chief Executive Officer	Chairman

b. Any amount exceeding $250,000 requires approval by the chief financial officer and chief executive officer; and if it exceeds $750,000, it must be submitted to the controller's office and circulated to the appropriate staff functions for review and comment prior to approval.

"2. Any sale of fixed assets having a gross book value not exceeding $250,000 may be approved by any corporate vice president as to assets within his area of responsibility, or by the treasurer as to assets acquired by the company in satisfaction of any debt to the company. This authorization also applies to any lease that must be treated as a sale under applicable accounting rules.

"3. Any lease, or option to renew, in which the company is lessee or lessor, that requires total rents or other fixed payments not exceeding $250,000, including rents and other fixed payments required during option periods that can be exercised against the company, may be approved by any corporate vice president whose area of responsibility includes the subject matter of the lease. The lease must be in a form approved by the general counsel or his designate, and if it requires total payments in excess of $25,000, it must be reviewed by the treasury department prior to execution. This authorization does not apply to any lease that must be treated as a purchase or sale under applicable accounting rules.

"4. Any acceptance of non-cash property having a fair market value not exceeding $250,000 may be approved by the chief financial officer.

Type	AMOUNT OF CAPITAL Project Expenditure		Approvals Required	Final Approval —Company	Final Approval— Company's Parent
	Corporate Staff & Groups/ Divisions With Sales Over $100 Million	Groups/Divisions with Sales Under $100 Million			
	$1,000,000 through $2,999,999	$1,000,000 through $2,999,999	Same as above	Chief Executive Officer	Executive Committee of Board of Directors
	$3,000,000 through and over	$3,000,000 through and over	Same as above	Chief Executive Officer	Board of Directors
Lease	Approval levels refer to total asset value of lease item.		Same approval levels as for Buildings, Machinery & Equipment		
Joint Ventures	Under $ 400,000	Under $400,000	Group/Division Gen. Manager Corporate Controller Chief Financial Officer Chief Operating Officer	Chief Executive Officer	Not required
	$ 400,000 through $ 749,999	$ 400,000 through $ 749,999	Same as above	Chief Executive Officer	President
	$ 750,000 through $ 999,999	$ 750,000 through $ 999,999	Same as above	Chief Executive Officer	Chairman
	$1,000,000 through $2,999,999	$1,000,000 through $2,999,999	Same as above	Chief Executive Officer Board of Directors	Executive Committee of Board of Directors
	$3,000,000 and over	$3,000,000 and over	Same as above	Chief Executive Officer	Board of Directors

(A) The Vice Presidents of Corporate Staff functions are:
V.P. - Administration & Planning
V.P. - Finance and Human Resources
V.P. - Engineering & Research

"5. Any forgiveness of any amount owed the company not exceeding $250,000 may be approved by the chief financial officer."

—A food products company

Modifications of Dollar Limits

Dollar limits on capital-expenditure authority are not always as straightforward as might be suggested by a casual perusal of the appendix. Twenty-three of the participating companies that delegate authority vary the limits that apply, often depending upon whether projects are included in approved capital budgets. (Limits for nonbudgeted proposals are usually considerably lower.)

Levels of spending authority are also sometimes modified in accordance with the type of transaction or investment. Authority to acquire land, for example, may be restricted to one or more specified officials, regardless of the amount of the outlay. Different limits may also apply depending upon whether working capital is included in expenditures or whether projects promise to meet hurdle rates. And limits extended to equally ranked officials of underlying operations (such as division presidents) occasionally vary in line with the volume each strategic business unit transacts.

Some companies that vary limits to cover two or more circumstances or that require two or more officials to authorize a project find it convenient to include matrices in the documents used to convey information on spending limits (Exhibit 5). But schedules suffice for others, with less complicated guidelines. The following tabulation reflects the distinct dollar limits fixed by a participating diversified manufacturer to cover projects previously approved during the planning process and projects not previously approved:

Authorizer	Dollar Limit for Projects in Approved Capital Plan	Dollar Limit for Projects not in Approved Capital Plan
Chairman of Board*	$10 million over capital plan amount	up to $10 million
Sector Presidents**	up to $3 million	up to $1.5 million

*The board of directors must approve all capital projects whose costs exceed the approval authority delegated to the chairman of the board.

**Sector presidents cannot exceed their capital spending plan for the year without the prior approval of the chairman of the board.

Reasons for Delegation

Were directors and senior corporate executives required to give final approval to every investment proposal, they would have time for little else. Freeing them from the burden of this responsibility in all but the most important cases is probably the main reason why capital-expenditure authority is delegated.

There are other justifications for the establishment of spending levels, however. The use of dollar limits fixes responsibility for individual projects—an important consideration when post-audits are conducted to determine how well forecast outcomes match up with actual results. Similarly, the delegation of dollar limits serves as a control on capital investments by restraining discretionary outlays. Giving executives of underlying units authority to commit funds to certain investments facilities the implementation of projects in locations removed from headquarters and, by tangibly demonstrating confidence in the ability of branch officials, boosts esprit de corps. By delegating authority to go forward with projects not included in approved capital budgets, the dollar-limit schedules of some companies make room for late-blooming, profit-promising proposals that might otherwise be excluded.

APPENDIX

Levels of Capital Expenditure Authority

This appendix provides specifics on dollar limits of capital expenditure authority currently effective in surveyed organizations. These companies are classified according to both industry or product line and range of capital budget.

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
MANUFACTURING		
Aircraft and Armaments		
A	II	Corporate Vice President—Material, Facilities and Services - over 250 Division and Subsidiary General Managers - up to 250
B	II	Board of Directors - over 2,000 Chairman of Board - over 1,000 President - over 100 Executive Vice President, Finance - up to 100
Aluminum Products		
A*	II	Board of Directors - over 10,000 Office of the Chairman - 3,000 to 10,000 Business Unit Vice President and Chairman of Facilities Planning Committee (jointly) - 1,000 to 3,000 Business Unit Vice President - up to 1,000
Apparel		
A	I	Board of Directors - 200 and higher Corporate President - 50 to 200 Division President - up to 50
B*	I	Board of Directors - over 15,000 Executive Committee - 4,000 to 15,000 COO/CEO - 700 to 4,000 President-Domestic or International - 400 to 700 Division President - up to 400
Beverages		
A	I	Vice President, Finance - over 25 Divisional President and Vice President, Finance - up to 25
B	III	Board of Directors - 5,000 and higher Office of Chief Executive - 2,500 to 5,000 Corporate Executive Vice Presidents - 1,000 to 3,500 Operating Company Presidents or Designees - up to 1,000
Chemicals		
A	I	Executive Committee - up to 250 Individual members of Executive Committee - up to 100 (for repair and maintenance)

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[1] Capital Expenditure Budget Categories:
Category I - $4 to $99 million
Category II - $100 to $499 million
Category III - $500 million and higher

*Delegated limits vary depending upon circumstances.

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Chemicals (cont'd)		
B	I	Board of Directors - 500 and higher Corporate President - 25 to 500 Group President - up to 25
C	I	Board of Directors (with Executive Committee) - 500 and higher Executive Committee - 25 to 500 Division Management - up to 25
D	I	Board of Directors - 500 and higher Division Presidents - up to 500
E	II	Board of Directors - 1,000 and higher Chairman - 100 to 1,000 Division Presidents - up to 100
F	II	Board of Directors - over 5,000 Chairman of Board - 1,000 to 5,000 President - 500 to 1,000 Group Vice Presidents - up to 500
G	II	Board of Directors - 5,000 Chairman and CEO - 2,000 to 5,000 Operating Group Presidents - up to 2,000
H	II	Board of Directors - over 10,000 Executive Committee - over 500 to 1,000 Corporate Officers - up to 500 Division Presidents - up to 350
I	II	Board of Directors - over 2,000 Chairman and Chief Executive Officer - 1,000 to 2,000 President and Chief Operating Officer, Chief Administrative Officer, Chairman of Executive Committee - 500 to 1,000 Group Executive - up to 500
J	II	Board of Directors - over 2,500 President/Chairman of Board (with Management Committee authorization) - up to 2,500 Vice Presidents (varies by function) - from 50 to 300 Assistant Vice President - Administration and Public Affairs - up to 125 Director, Business Centers (varies by center) - from 50 to 125 Director, Engineering and construction up to 50 Auxiliary Department Heads - up to 25
K	III	Board of Directors - 5,000 and higher Chairman and President - 3,000 to 5,000 Executive Vice Presidents - up to 3,000 Managing Directors and Senior Staff Officers - up to 1,000
L	III	Finance Committee - unlimited Executive Committee - 5,000 to 10,000 Member of Executive Committee and Chairman or Vice Chairman - 2,000 to 5,000 Executive, Group or Senior Vice President - up to 2,000

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Construction Products		
A	I	Board of Directors - 100 and higher Senior Management Committee - 10 to 100 Division General Manager - up to 10
B	I	President - over 50 Group Vice President - 25 to 50 SBU Manager - 1 to 25 Operating Manager - up to 1
C*	I	Board of Directors - over 500 Appropriation Committee - 200 to 500 General Managers of operating groups - up to 200
D	I	Board of Directors - 500 and higher Chairman & CEO - 150 to 500 President & COO - 50 to 150 Officers reporting to President - up to 50
E	II	Board of Directors - over 10,000 Management Committee - up to 10,000 Chairman, President, Senior Vice Presidents - up to 1,000 Operating Vice Presidents - up to 500
Containers		
A	II	Board of Directors - 3,000 and higher Business Investment Committee - 1,000 and higher (up to 3,000) Sector Executive - up to 1,000 Business General Manager - up to 250
B	II	Board of Directors - over 5,000 Any two members of executive office - 3,000 to 5,000 Any member of executive office - 1,000 to 3,000 Group or Senior Vice President - 250 to 1,000 Division Manager - Corporate Officer - 25 to 250 Subdivision Manager - Corporate Officer - 25 to 100 Divisional or Major Segment Manager - 10 to 25 Plant or Facility Manager - up to 10
Cosmetics		
A	II	Board of Directors - over 5,000 Chief Executive Director - up to 5,000 Senior and group vice presidents - up to 100 Vice Presidents - up to 50 General Managers - up to 10
B	II	Board of Directors - over 1,500 Chairman of Board - up to 1,500 President - up to 750 Executive Vice President - up to 250
Diversified		
A	I	Board of Directors - over 1,000 Chairman of Board - 500 to 1,000 Executive Vice Presidents - 100 to 500 Division Officers - up to 100

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Diversified (cont'd)		
B	I	Board of Directors - over 1,000 Capital Committee - up to 1,000 Vice Presidents, Group Executives - up to 100 Division General Managers/Subsidiary Presidents - up to 25
C*	I	Board of Directors - 5,000 and higher (existing businesses) Board of Directors - 1,000 and higher (new businesses) Chairman - 500 and higher Financial Vice President - 250 and higher
D	II	Business Unit Presidents - up to 100 (outside approved budgets) Vice President, Planning and Vice President, Manufacturing and Technology - all commercial projects Group Vice President, Defense and Aerospace - most military projects
E	II	Board of Directors - over 5,000 Capital Expenditure Committee - 1,000 to 5,000 Group Presidents - up to 1,000
F	II	Board of Directors - over 5,000 Executive Committee - 1,000 to 5,000 CEO - 500 to 1,000 Executive Vice Presidents - up to 500 Division Presidents and Area Vice Presidents (varying limits) - from 100 to 250
G	III	Board of Directors - over 10,000 CEO - up to 10,000 COO - up to 10,000 Executive Vice Presidents - up to 7,500 Division Presidents - up to 5,600
H	III	Board of Directors - over 25,000 Corporate Executive Office - 20,000 to 25,000 Sector Executives - up to 20,000
I*	III	Chairman of Board - 10,000 over capital plan amount Sector Presidents - up to 3,000
J	III	Chairman - up to 5,000 President - up to 2,500 Senior Vice President, Division Head - up to 1,000
K	III	Chairman and CEO - Unlimited President and COO - Unlimited Vice President and Presidents of Operating Units - up to 1,000 General Manager - 100 to 500
L	III	General Manager, Group Executive (Executive Vice President), Appropriations Review Committee, Executive Committee, and Finance Committee - over 10,000 General Manager, Group Executive (Executive Vice President), Appropriations Review Committee, Executive Committee - over 1,000 to 10,000

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Diversified (cont'd)		
		General Manager, Group Executive (Executive Vice President) - over 500 to 1,000 General Manager or designated representative - up to 500
M	III	Board of Directors - over 50,000 Finance Committee - 10,000 to 50,000 Office of the Chief Executive - 5,000 to 10,000 Executive Vice President - 1,000 to 5,000 Vice President - 500 to 1,000 Division General Manager - up to 500
Electronic Products		
A	I	Board of Directors - over 3,000 Chairman - up to 3,000 Sector Heads - up to 1,500 Division Presidents - up to 200
B	I	Board of Directors - 200 and higher Corporate M.E.C. Committee - 100 to 200 Group Vice President - 50 to 100 Product Division General Manager - up to 50
C*	II	Board of Directors - unlimited Chief Executive Officer - over 750 Corporate President - up to 750 Executive Vice President - up to 500 Group Vice President - up to 250 President & General Manager of Divisions - up to 50
D*	II	President - up to 1,000 Certain Vice Presidents - up to 500
Food Products		
A*	I	Executive Committee - up to 200 Vice Chairman - up to 50 President - up to 50
B	I	Board of Directors - 1,000 and higher President - 100 and higher Business Unit Head - up to 100
C	I	Board of Directors - over 1,000 President - 250 to 1,000 Executive Vice President - 150 to 250 Vice President - 25 to 150 Department Heads - up to 25
D	II	Board of Directors - over 250 Vice Chairman and CEO - 100 to 250 President and COO - 100 to 250 Company and/or Division President - up to 100 Corporate Vice Presidents - up to 100
E	II	Board of Directors - unlimited Executive Committee of the Board - 2,000 President (CEO) - 1,000 Senior Vice Presidents - 500 Affiliate Top Management - 50 to 250

Industry and Company	Capital Expenditure Budget Category[†]	Levels of Capital Expenditure Authority (thousands of dollars)
Food Products (cont'd)		
F	II	Board of Directors - 2,000 and higher Chief Executive Officer - 250 to 2,000 Executive Vice President - 50 to 250 Group, Area Vice President - 10 to 50 General Manager, Operation - .5 to 10
G	II	Board of Directors - 2,000 and higher Chief Executive Officer - 1,000 up to 2,000 Committee of Chief Operating Officers - 500 up to 1,000 Chief Operating Officer - 100 up to 500 Division Presidents - up to 100
H	II	Board of Directors - 5,000 and higher Chief Executive Officer - 2,000 to 5,000 Vice Chairman - 1,000 to 2,000 Executive Vice Presidents - up to 1,000 Subsidiary presidents and general managers - varies
I	II	Board of Directors - over 1,000 Capital Appropriations Committee - 251 to 1,000
J	II	Board of Directors - 2,000 and higher Chairman, CEO and CFO - up to 2,000 Corporate Vice Presidents - up to 250
K[*]	II	Board of Directors - 5,000 and higher President - up to 4,999 Executive Vice Presidents and Group Vice President (Sector Heads) - up to 1,999 Area Presidents, Division General Managers, Operations Directors, Group Executives, Officer Heads of Operating Units - up to 499
Forest Products		
A	I	Board of Directors - major acquisition and new ventures Finance Committee - overall capital budget Corporate Vice Presidents - up to 50 General Managers - up to 20 Corporate staff officers - up to 10
Hardware and Tools		
A	I	Board of Directors - over 150 Chief Executive Officer, Chief Operating Officer, and Chief Financial Officer - 25 to 150 Operating Unit Management - up to 25
B	I	Chairman of the Board - over 500 President and Vice President, Finance—over 125 Group Vice Presidents - up to 125
Machinery, Appliances and Equipment		
A[*]	I	Varies by type of asset or activity and by volume transacted
B[*]	I	Vice President of Capital Administration with either Corporate Controller or Corporate Treasurer - over 25 Division Vice President - up to 25

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Machinery, Appliances and Equipment (cont'd)		
C	I	Corporate President - 200 and higher Group Vice President - 20 to 200 Division President - up to 20
Medical Supplies and Devices		
A*	I	Board of Directors - over 250 Capital Allocation Committee and Chief Executive Officer - 100 to 250 Chief Financial Officer - 50 to 100 Group Vice President - 25 to 50 Direct subordinates of Group Vice Presidents - 10 to 25
B	I	Board of Directors - 500 and higher Operations Committee - 100 to 500 Senior Vice President - 50 to 100 Division President - up to 50
C	II	Executive Committee—over 1,000 Company Chairmen or Presidents - as authorized by responsible executive committee members
Office Copying, Computing and Other Equipment		
A	II	Board of Directors - over 500 President, Chief Executive Officer - 100 to 500 Group, Division President - up to 100
B	II	Chief Executive Officer - over 10,000 Executive Vice President - up to 10,000 Senior Vice President, Group Vice President - up to 5,000 Operating Unit Vice President - 200 to 2,000
C*	II	Chairman & CEO - 20,000 President & COO - 20,000 Operating Group President - 7,500 Operating Group Vice President - 1,000 Headquarters Service Function Vice President - 1,000
D*	II	Board of Directors - over 500 CEO - up to 500 Operating Heads - up to 100
E*	III	Executive Committee - over 8,000 Policy Committee - up to 8,000 Profit Center Executive - up to 5,000
Petroleum and Petroleum Products		
A*	II	Board of Directors alone or with Senior Corporate Management - over 2,000 Divisional Presidents - up to 2,000
B	II	Board of Directors - over 4,000 Executive Committee - 2,000 to 4,000 Subsidiary Board of Directors - 1,000 to 2,000 Chief Executive Officer - up to 1,000 Chief Operating Officer - up to 750 Division heads - up to 500 Designees of division heads - up to 250

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Petroleum and Petroleum Products (cont'd)		
C*	III	Board of Directors - Unlimited Chairman or President - up to 50,000 Vice Chairman or Executive Vice Presidents - up to 25,000 Operating Company Presidents - up to 15,000 Corporate Division Heads - up to 5,000
D*	III	Executive Committee - over 4,000 Large subsidiary - up to 4,000 Intermediate-sized subsidiary - up to 2,000 Small subsidiary - up to 500
Pharmaceutical Products		
A*	I	Board of Directors - over 3,000 Top Management Operations Committee - 500 to 3,000 Corporate Executive Vice President - 150 to 500 Division General Manager - 15 to 115
B	II	Board of Directors - 2,000 and higher Capital Project Committee - 500 to 2,000 Group Presidents - up to 500
C	II	Board of Directors - over 5,000 Executive Committee - 300 to 5,000 Component Appropriations Committee - up to 300
D	II	Board of Directors - over 10,000 Executive Committee - 2,000 to 10,000 Chairman - 1,000 to 2,000 President - 500 to 1,000 Group Presidents - 250 to 500 Division Presidents - up to 250
E	II	Board of Directors - 500 and higher Chairman, Vice Chairman or President - 200 to 500 Executive Vice President - .5 to 200 General Manager, Vice President - .5 to 100
F	II	Board of Directors - over 3,000 Chairman of the Board - 1,500 to 3,000 President - 250 to 1,500 Corporate Senior Vice Presidents - up to 250 Division Officers and Managers - varies by division
Rubber and Plastic Products		
A	I	Boards of Directors - 1,000 and higher Chairman, Domestic - 250 to 1,000 Chairman, Foreign - 100 to 1,000 Local (Manager) Domestic - up to 250 Local (Manager) Foreign - up to 100
B	II	Board of Directors - over 5,000 Chief Executive Officer - up to 5,000 President & Chief Operating Officer - up to 3,000 Group Management - up to 1,000 Company Vice President - up to 500
C	II	Board of Directors - over 3,000 Management Committee - 1,500 to 3,000 Executive Office - 750 to 1,500 Group Managers - up to 750

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Steel and Steel Products		
A	I	President and Vice Presidents - over 10 Division Managers - up to 10
B	II	Board of Directors - 5,000 and higher Management Policy Committee and Chief Operating Officer or Vice Chairman - 2,000 to 5,000 Executive Vice President - 1,000 to 2,000 Vice Presidents and General Managers - up to 1,000
C	II	Board of Directors - over 1,000 President - 250 to 1,000 Vice President - up to 250
D	II	Office of Chairman (Chairman, Vice Chairman, and President) - over 50 Group Presidents - up to 50 (subject to annual cumulative total of 1,000)
E	III	Board of Directors - over 15,000 Corporate Management Committee - 2,500 to 15,000 Executive Management - up to 2,500
NONMANUFACTURING		
Mining		
A	II	Chairman and President - up to 5,000 Other Corporate Officers - varies from 10 to 1,500
B	II	Board of Directors - 1,000 and higher Advisory Committee - 1 to 1,000
Retailing		
A	I	Board of Directors - 2,500 and higher
B	I	Chairman of the Board - 250 and higher Chief Executive Officers (Operating Units) - 10 to 50 Chief Executive Officer or designee - up to 10
C	II	Board of Directors - over 5,000 Senior Corporate Management - up to 5,000 Division Principals - up to 100
D	II	Corporate Capital Approval Committee - 100 and higher Presidents, Operating Companies - up to 100
E	III	Board of Directors - 4,000 and higher President, CEO -1,000 to 4,000 Vice Chairman, CAO - 500 to 1,000 Large operating company CEO's - up to 500 Medium-sized operating company CEO's - up to 250 Small operating company CEO's - up to 100
Service		
A	I	Board of Directors - 500 and higher President - 50 to 500 Group Presidents - up to 50
B	I	Board of Directors - over 1,000 Chairman - 500 to 1,000 President - up to 500

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Service (cont'd)		
C	I	Executive Committee - over 1,000 Finance Committee - over 500 to 1,000 Responsible line manager - up to 500
D	I	Board of Directors - over 1,000 Executive Management Committee - 250 to 1,000 Executive Vice President - 100 to 250 Group Vice President - up to 100
E	II	Board of Directors - 500 and higher Capital Committee - 100 to 500 Division President/General Manager - up to 100
F	II	Board of Directors - over 20,000 Executive Committee - up to 20,000 Chief Executive Officer - up to 5,000 Chief Operating Officer - up to 3,000 Chairman, major units - up to 2,000 Presidents, major units - up to 1,000 Presidents, minor units - up to 500
G	III	Finance Committee - over 1,000 President and CEO - up to 1,000 Transportation Group Chief Operating Officer - up to 750 Division Presidents (varies by size and type, but generally) - from 250 to 500
Transportation		
A	I	Board of Directors - 1,000 and higher President - up to 1,000 Senior Vice President and CFO - up to 250 Vice President and Treasurer - up to 100
B	II	Board of Directors - over 450 Chairman - up to 450 President - up to 350 Vice President - up to 60
C*	II	Board of Directors - over 250 President - up to 250 Group Vice Presidents - up to 50 (Concurrence of others usually also required)
D	II	Board of Directors - 250 and higher President - up to 250 (nonbudgeted projects) Senior Vice President - up to 15 (nonbudgeted projects)
E*	II	Board of Directors - over 1,000 Chairman - up to 1,000 President and Chief Executive Officer - up to 500 Senior Vice Presidents - up to 250 Vice Presidents - up to 25 or 50 (according to function)
Utility		
A	II	Executive Level - over 100 Division Managers - up to 100 Department Managers - up to 10 Section Superintendent - up to 5 First line supervisors - up to 1

Industry and Company	Capital Expenditure Budget Category[1]	Levels of Capital Expenditure Authority (thousands of dollars)
Utility (cont'd)		
B*	II	President, Senior Vice President - Finance, Vice President Corporate Facilities, Director Facilities & Property Development, Division Director and Responsible Individual - over 15,000 Senior Vice President Finance, Vice President Corporate Facilities, Director Facilities & Property Development, division director, and Responsible Individual - over 500 Vice President Corporate Facilities, Director Facilities & Property Development, Division Director, and Responsible Individual - up to 10
C	II	Chairman of Board - over 500 Executive Vice President - up to 500 President - over 100 Vice President - up to 100
D	III	Vice President - over 25
E*	III	Board of Directors - over 10,000 President or Chairman - up to 10,000 Executive Vice President, Finance - up to 1,500 Group Presidents - varies from 250 to 1,500 Vice President, Operations services - up to 500

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[1] Capital Expenditure Budget Categories:

Category I - $4 to $99 million
Category II - $100 to $499 million
Category III - $500 million and higher

*Delegated limits vary depending upon circumstances.